Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

Proposed

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**Calgon Carbon Corporation**
Mailing Address:	**P.O. Box 664** **Catlettsburg, KY 41129**
Source Name:	**Same as above.**
Mailing Address:	**Same as above.**
Source Location:	**U.S. Route 23S** **Catlettsburg, KY 41129**
Permit Number:	**V-06-020**
Source A. I. #:	**315**
Activity #:	**APE20050001**
Review Type:	**Title V,Construction/Operating**
Source ID #:	**21-019-00014**
Regional Office:	**Ashland Regional Office** **1550 Wolohan Drive, Suite 1** **Ashland, KY 41102-8942** **(606) 929-5285**
County:	**Boyd**
Application Complete Date:	**May 6, 2005**
Issuance Date:	**July 13, 2006**
Revision Date:	**N/A**
Expiration Date:	**July 13, 2011**

John S. Lyons, Director
Division for Air Quality

Revised 12/09/02

TABLE OF CONTENTS

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Index of Emission Points Listed in Section B

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Index of Emission Points Listed in Section B

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

A. A-LINE:

08 (A-10) A-Line Packaging Operations
Capacity: 2.0 tons/hour Granular Activated Product
Constructed: 1960
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
W.W. Sly Manufacturing Company
Dynaclone No. 12, Type A
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1960

APPLICABLE REGULATIONS:

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the A-Line Packaging operations.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the A-Line Packaging operations.

1. Operating Limitations:

The total weight of activated carbon processed at the A-Line Packaging operations shall not exceed 2.0 tons per hour and 17,520 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.

b. Hourly activated carbon throughput = [Total weight of activated carbon processed at the A-Line Packaging operations each month] ÷ [Total hours of activated carbon processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the A-Line Packaging operations shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of activated carbon processed at the A-Line Packaging operations (i.e.: The hourly activated carbon throughput rate determined in paragraph **1.b.**, above).

b. The opacity of visible emissions from the A-Line Packaging operations shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(111.428 lbs PM/per ton activated carbon x (1-0.99)), or emission factor observed during last stack test* (in

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

A. A-LINE:

08 (A-10) A-Line Packaging Operations (Continued)

pounds PM/per ton activated carbon)] x [The hourly activated carbon throughput rate determined in paragraph **1.b.**, above.]

(*Alternate emission factor may be established based on demonstration of similarity to other tested sources and/or estimated using credible engineering judgment based on conservative assumptions.)

(2) The baghouse associated with the A-Line Packaging operations shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the A-Line Packaging is in operation. The permittee is required to use the baghouse associated with the A-Line Packaging operations in order meet the particulate matter emission standard for the A-Line Packaging operations.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the A-Line Packaging unit is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of activated carbon processed at the A-Line Packaging operations each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of activated carbon processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the A-Line Packaging baghouse once per week during A-Line Packaging operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the A-Line Packaging baghouse to ensure it

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

A. A-LINE:

08 (A-10) A-Line Packaging Operations (Continued)

is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the A-Line Packaging baghouse shall be made at least once per 24-hour period during A-Line Packaging operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of activated carbon processed at the A-Line Packaging operations each month.

b. Each month, the permittee shall record the total weight of activated carbon processed at the A-Line Packaging operations during the previous 12 months.

c. The permittee shall record the total hours of activated carbon processing during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the A-Line Packaging unit is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the A-Line Packaging operations stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. If an emission factor from other than listed above in **Compliance Demonstration Method 2.a.** is used, the permittee shall record the emission factor, its supporting assumptions, and calculations.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

A. A-LINE:

08 (A-10) A-Line Packaging Operations (Continued)

h. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

i. The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

ii. The date(s) analyses (i.e.: Testing) were performed;

iii. The company or entity that performed the analyses;

iv. The analytical techniques or methods used;

v. The results of such analyses; and

vi. The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the A-Line Packaging unit is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

A. A-LINE:

08 (A-10) A-Line Packaging Operations (Continued)

downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

09 (B-01) B-Line Coal and Pitch Preparation Area
B-Line Preparation Area to Baker Elevator
Capacity: 9.0 tons/hour Processed Coal
Constructed: 1965
Rebuilt: 1990
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
Griffin
Pulse/Tube Type
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1990

APPLICABLE REGULATIONS:

401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the B-Line Coal and Pitch Preparation operations.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the B-Line Coal and Pitch Preparation operations.

1. Operating Limitations:

The total weight of coal processed at the B-Line Coal and Pitch Preparation operations shall not exceed 9.0 tons per hour and 78,840 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly coal throughput = [Total weight of coal processed at the B-Line Coal and Pitch Preparation Area each month] ÷ [Total hours of coal processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the B-Line Coal and Pitch Preparation Area shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of coal processed at the B-Line Coal and Pitch Preparation Area (i.e.: The hourly coal throughput rate determined in **1.b.**, above).
b. Emissions of particulate matter from the B-Line Coal and Pitch Preparation operations shall not exceed 3.29 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].
c. The opacity of visible emissions from the B-Line Coal and Pitch Preparation operations shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

09 (B-01) B-Line Coal and Pitch Preparation Area (Continued)

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(8.346 lbs PM/ton coal processed x (1-0.99)), or emission factor observed during last stack test (in pounds PM/per ton coal)] x [The hourly coal throughput rate determined in **1.b.**, above].

(2) The baghouse associated with the B-Line Coal and Pitch Preparation operations shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the B-Line Coal and Pitch Preparation Area is in operation. The permittee is required to use the baghouse associated with the B-Line Coal and Pitch Preparation operations in order meet the particulate matter emission standard for the B-Line Coal and Pitch Preparation operations.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter from the B-Line Coal and Pitch Preparation operations shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the B-Line Coal and Pitch Preparation Area is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of coal processed at the B-Line Coal and Pitch Preparation Area each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of coal processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the B-Line Coal and Pitch Preparation Area baghouse once per week during operation of the B-Line Coal and Pitch Preparation Area. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

09 (B-01) B-Line Coal and Pitch Preparation Area (Continued)

visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the B-Line Coal and Pitch Preparation Area baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the B-Line Coal and Pitch Preparation Area baghouse shall be made at least once per 24-hour period during operation of the B-Line Coal and Pitch Preparation Area. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of coal processed at the B-Line Coal and Pitch Preparation Area each month.

b. Each month, the permittee shall record the total weight of coal processed at the B-Line Coal and Pitch Preparation Area during the previous 12 months.

c. The permittee shall record the total hours of coal processing during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the B-Line Coal and Pitch Preparation Area is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the B-Line Coal and Pitch Preparation Area stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

09 (B-01) B-Line Coal and Pitch Preparation Area (Continued)

permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the B-Line Coal and Pitch Preparation Area is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

09 (B-01) B-Line Coal and Pitch Preparation Area (Continued)

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

11 (B-02) Two (2) B-Line Bakers with Waste Heat Boiler (51.0 mmBtu/hr)
B-Line 1st Pass Baker to B-Line 2nd Pass Baker Drag Conveyor
B-Line Baker to Activator Elevator
B-Line Baker to C-Line Activator Transfer Elevator
Urea Injection Provision for Custom Product
Capacity: 7.8 tons/hour Processed Coal Granules
Constructed: 1965
Replaced: 1990
8760 hrs/yr

Controls: Wet Scrubber (PM/PM_{10}, SO_2)
D.R. Technologies
3-Stage Impinge. Tray
Press. Drop: 5.5" H20
Liq. Flow: 100-180 gpm

Dir. Flame Afterburner (VOC)
Process Comb. Corp.
Model 66-007-08
51 mmBtu/hour, Natural Gas

APPLICABLE REGULATIONS:

401 KAR 50:012, *General Application*, applies to the emissions of volatile organic compounds from the B-Line Bakers.

401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the B-Line Bakers.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter and sulfur dioxide from the B-Line Bakers.

1. Operating Limitations:

The total weight of coal processed through the B-Line Bakers shall not exceed 7.8 tons per hour and 68,328 tons during any consecutive 12 months [State-only Requirement, Permit V-00-015].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly coal throughput = [Total weight of coal processed at the B-Line Bakers each month] ÷ [Total hours of operation of the B-Line Bakers during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the B-Line Bakers shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

11 (B-02) Two (2) B-Line Bakers (Continued)

For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$

Where E = rate of emissions in lb/hr, and

P = process weight rate in tons/hr of coal processed at the B-Line Bakers (i.e.: The hourly coal throughput rate determined in **1.b.**, above).

b. Emissions of particulate matter from the B-Line Bakers shall not exceed 21.46 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

c. The opacity of visible emissions from the B-Line Preparation Area to Baker Elevator shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

d. Emissions of sulfur dioxide from the B-Line Bakers shall not exceed 8.90 lb/hr and 39.0 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

e. The afterburner associated with the B-Line Bakers shall control emissions of volatile organic compounds (VOC) and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the B-Line Bakers are in operation [401 KAR 50:012, Section 1 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM / SO_2 Emission Rate = [(4.139 lbs PM/ton coal processed x (1-0.85)), (4.562 lb SO_2/ton coal processed x (1-0.75)), or emission factor observed during last stack test (in pounds PM / SO_2 per ton coal)] x [The hourly coal throughput rate determined in **1.b.**, above].

(2) The wet scrubber associated with the B-Line Bakers shall control emissions of particulate matter and sulfur dioxide and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the B-Line Bakers are in operation. The permittee is required to use the wet scrubber associated with the B-Line Bakers in order meet the applicable emission standards for particulate matter and sulfur dioxide.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding wet scrubber use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter and sulfur dioxide from the B-Line Bakers shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the wet scrubber, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the B-Line Bakers are in operation during any period of malfunction of the associated wet scrubber, the permittee shall determine compliance through maintenance of the records required by paragraph **5.f.** below.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

11 (B-02) Two (2) B-Line Bakers (Continued)

d. Use of Afterburner:
See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of coal processed at the B-Line Bakers each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of coal processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the B-Line Bakers scrubber once per week during operation of the B-Line Bakers. The weekly inspection shall consist of the visual emissions observation as outlined in paragraph **5.f.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the temperature in the combustion chamber of the afterburner.

e. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements for the wet scrubber:

(1) The permittee shall monitor the continuous measurement of the minimum total flow rate of liquid to the scrubber to ensure it is at least 100 gpm based on a 3-hour average. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the minimum total scrubbing liquid flow rate shall be made at least once per 24-hour period during operation of the B-Line Bakers. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs when any 3-hour period during which the average flow rate of scrubbing liquid to the scrubber was below the minimum specified in paragraph **4.e.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

11 (B-02) Two (2) B-Line Bakers (Continued)

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of coal processed at the B-Line Bakers each month.

b. Each month, the permittee shall record the total weight of coal processed at the B-Line Bakers during the previous 12 months.

c. The permittee shall record the total hours of operation of the B-Line Bakers each month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. The permittee shall keep records of the continuous measurement of the temperature in the combustion chamber of the afterburner.

f. During all periods of malfunction of the wet scrubber, if the B-Line Bakers are in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the wet scrubber stack;

(2) Whether the visible emissions were normal for the wet scrubber stack.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the B-Line Bakers wet scrubber stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

g. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the B-Line Bakers are in operation but the corresponding afterburner is not in operation.

h. The permittee shall record all maintenance activities performed at the wet scrubber and afterburner.

i. The permittee shall record the quantity of urea utilized during the manufacture of custom product, and the manufacturing schedule for the custom product runs. [Permit V-00-015]

j. The following recordkeeping requirements are included to fulfill CAM for the wet scrubber:

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

11 (B-02) Two (2) B-Line Bakers (Continued)

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the average flow rate of scrubbing liquid to the scrubber), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter, sulfur dioxide, and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the B-Line Bakers are in operation but the associated wet scrubber is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM for the wet scrubber:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

11 (B-02) Two (2) B-Line Bakers (Continued)

7. Specific Control Equipment Operating Conditions:

The B-Line Baker afterburner shall operate at a minimum temperature of 1400°F (3-hour average). An **excursion** from the operating range specified is any 3-hour period during which the average temperature in the afterburner was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

12 (B-08, 09) B-Line Baker Heater
Pyronics
Capacity: 20 mmBtu/hour
Natural Gas
Replaced: 1990
8760 hrs/yr

APPLICABLE REGULATIONS:

401 KAR 53:005, *General provisions* was applied to this emission point in order to meet NAAQS for sulfur dioxide.

401 KAR 59:015, *New indirect heat exchangers*, applies to the emissions of particulate matter and sulfur dioxide from the B-Line Baker Heater.

1. Operating Limitations: None.

2. Emission Limitations:

a. Emissions of particulate matter from the B-Line Baker Heater shall not exceed 0.35 lb/mmBtu [401 KAR 59:015, Section 4 (1)].

b. Emissions of sulfur dioxide from the B-Line Baker Heater shall not exceed 0.0853 lb/mmBtu [401 KAR 53:005, and Permit V-00-015 (Revision 2)].

c. The opacity of visible emissions from the B-Line Baker Heater shall not exceed 20 percent [401 KAR 59:015, Section 4 (2)] except as provided below:

(1) Pursuant to 401 KAR 59:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.

(2) Pursuant to 401 KAR 59:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

(3) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method:

a. Mass Emission Limits:
For particulate matter and sulfur dioxide, compliance is demonstrated while natural gas is the only fuel used.

b. Opacity Limits:
Compliance is demonstrated for the applicable opacity standard while natural gas is the only fuel used.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

12 (B-08, 09) B-Line Baker Heater (Continued)

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

The permittee shall monitor the fuel consumption of natural gas at the B-Line Baker Heater. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the fuel consumption of natural gas at the B-Line Baker Heater.

6. Specific Reporting Requirements:

None.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

14 (B-04) B-Line Activator Furnace #3
Feed Bin to B-Line Activator Transfer Elevator (2)
Multiple Burners (12.0 mmBtu/hr total)
Natural Gas
Capacity: 1.5 tons/hour Devolatized Carbon Granules
8760 hours/year

Controls: Wet Scrubber (PM/PM_{10}, SO_2)
D.R. Technologies
2-stage Venturi Spray
Minimum Pressure Drop: 8 in. H_2O
Minimum Liquid Flow: 750 gpm

Direct Flame Afterburner (VOC)
Integrated into Activator Furnace (i.e.: top burner section of furnace)
Natural Gas

APPLICABLE REGULATIONS:

401 KAR 50:012, *General Application*, applies to the emissions of volatile organic compounds from the B-Line Activator.

401 KAR 53:005, *General provisions* was applied to this emission point in order to meet NAAQS for sulfur dioxide.

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the B-Line Activator.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter and sulfur dioxide from the B-Line Activator.

1. Operating Limitations:

The total weight of carbon processed through the B-Line Activator shall not exceed 1.5 tons per hour and 13,140 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly carbon throughput = [Total weight of carbon processed through the B-Line Activator each month] ÷ [Total hours of operation of the B-Line Activator during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the B-Line Activator shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

14 (B-04) B-Line Activator Furnace (Continued)

For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$

Where E = rate of emissions in lb/hr, and

P = process weight rate in tons/hr of carbon processed through the B-Line Activator (i.e.: The hourly carbon throughput rate determined in **1.b.**, above.).

b. The opacity of visible emissions from the B-Line Activator shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

c. Emissions of SO_2 from the B-Line Activator shall not exceed 2.88 lbs/hr and 12.6 tons during any consecutive 12 months [401 KAR 53:005, and Permit V-00-015 (Revision 2)].

d. The afterburner shall control emissions of volatile organic compounds and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the B-Line Activator is in operation [401 KAR 50:012, Section 1 (1)]. The B-Line Activator is considered in operation any time carbon is being conveyed to the Activator.

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM / SO_2 Emission Rate = [(35.747 lbs PM/ton carbon granules processed x (1-0.90)), (19.171 lb SO_2/ton carbon granules processed x (1-0.90)), or emission factor observed during last stack test (in pounds PM / SO_2 per ton carbon)] x [The hourly carbon throughput rate determined in **1.b.**, above].

(2) The wet scrubber associated with the B-Line Activator shall control emissions of particulate matter and sulfur dioxide and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the B-Line Activator is in operation. The permittee is required to use the wet scrubber associated with the B-Line Activator in order to maintain NAAQS emission standards for sulfur dioxide.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding wet scrubber use.

b. Annual Mass Emission Standard:

The total emissions of sulfur dioxide from the B-Line Activator shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the wet scrubber, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the B-Line Activator is in operation during any period of malfunction of the associated wet scrubber, the permittee shall determine compliance through maintenance of the records required by paragraph **5.f.** below.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

14 (B-04) B-Line Activator Furnace (Continued)

d. Use of Afterburner:
See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of carbon processed at the B-Line Activator each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of operation of the B-Line Activator per month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the B-Line Activator scrubber once per week during operation of the B-Line Activator. The weekly inspection shall consist of the visual emissions observation as outlined in paragraph **5.f.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the temperature in the combustion chamber of the afterburner.

e. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements for the wet scrubber:

(1) The permittee shall monitor the continuous measurement of the pressure loss of waste gas stream through the wet scrubber to ensure it is at least 8 in. H_2O based on a 3-hour average, and the minimum total flow rate of liquid to the scrubber to ensure it is at least 750 gpm based on a 3-hour average. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device(s) used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location(s), installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure loss of waste gas stream through the wet scrubber and the minimum total scrubbing liquid flow rate shall be made at least once per 24-hour period during operation of the B-Line Activator. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs when any 3-hour period during which the average pressure loss of waste gas stream through the wet scrubber or the average flow rate of scrubbing liquid to the scrubber was below the minimums specified in paragraph **4.e.(1)**, above. [40 CFR 64.6(c)(2)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

14 (B-04) B-Line Activator Furnace (Continued)

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of carbon processed at the B-Line Activator each month.

b. Each month, the permittee shall record the total weight of carbon processed at the B-Line Activator during the previous 12 months.

c. The permittee shall record the total hours of operation of the B-Line Activator each month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. The permittee shall keep records of the continuous measurement of the temperature in the combustion chamber of the afterburner.

f. During all periods of malfunction of the wet scrubber, if the B-Line Activator is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the wet scrubber stack;

(2) Whether the visible emissions were normal for the wet scrubber stack.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the B-Line Activator wet scrubber stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

g. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the B-Line Activator in operation but the corresponding afterburner is not in operation.

h. The permittee shall record all maintenance activities performed at the wet scrubber and afterburner.

i. The following recordkeeping requirements are included to fulfill CAM for the wet scrubber:

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

14 (B-04) B-Line Activator Furnace (Continued)

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the average pressure loss of waste gas stream through the wet scrubber, and the average flow rate of scrubbing liquid to the scrubber), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter, sulfur dioxide, and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the B-Line Activator is in operation but the associated wet scrubber is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM for the wet scrubber:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

14 (B-04) B-Line Activator Furnace (Continued)

implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

The B-Line Activator afterburner shall operate at a minimum temperature of 1400°F (3-hour average). An **excursion** from the operating range specified is any 3-hour period during which the average temperature in the afterburner was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

15 (B-06) B-Line Packaging Operations
Capacity: 2.0 tons/hour Granular Activated Product
Constructed: 1965
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
W.W. Sly Manufacturing Company
Dynaclone No. 12, Type A
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1965

APPLICABLE REGULATIONS:

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the B-Line Packaging operations.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the B-Line Packaging operations.

1. Operating Limitations:

The total weight of activated carbon processed at the B-Line Packaging operations shall not exceed 2.0 tons per hour and 17,520 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.

b. Hourly activated carbon throughput = [Total weight of activated carbon processed at the B-Line Packaging operations each month] ÷ [Total hours of activated carbon processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the B-Line Packaging operations shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of activated carbon processed at the B-Line Packaging operations (i.e.: The hourly activated carbon throughput rate determined in paragraph **1.b.**, above).

b. The opacity of visible emissions from the B-Line Packaging operations shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(326.142 lbs PM/per ton activated carbon x (1-0.99)), or emission factor observed during last stack test* (in pounds

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

15 (B-06) B-Line Packaging Operations (Continued)

PM/per ton activated carbon)] x [The hourly activated carbon throughput rate determined in paragraph **1.b.**, above.]

(*Alternate emission factor may be established based on demonstration of similarity to other tested sources and/or estimated using credible engineering judgment based on conservative assumptions.)

(2) The baghouse associated with the B-Line Packaging operations shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the B-Line Packaging is in operation. The permittee is required to use the baghouse associated with the B-Line Packaging operations in order meet the particulate matter emission standard for the B-Line Packaging operations.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the B-Line Packaging unit is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of activated carbon processed at the B-Line Packaging operations each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of activated carbon processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the B-Line Packaging baghouse once per week during B-Line Packaging operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the B-Line Packaging baghouse to ensure it

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

15 (B-06) B-Line Packaging Operations (Continued)

is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the B-Line Packaging baghouse shall be made at least once per 24-hour period during B-Line Packaging operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of activated carbon processed at the B-Line Packaging operations each month.

b. Each month, the permittee shall record the total weight of activated carbon processed at the B-Line Packaging operations during the previous 12 months.

c. The permittee shall record the total hours of B-Line Packaging operations during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the B-Line Packaging unit is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the B-Line Packaging operations stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. If an emission factor from other than listed above in **Compliance Demonstration Method 2.a.** is used, the permittee shall record the emission factor, its supporting assumptions, and calculations.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

15 (B-06) B-Line Packaging Operations (Continued)

h. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the B-Line Packaging unit is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B. B-LINE:

15 (B-06) B-Line Packaging Operations (Continued)

downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

21 (C-04, 05) C-Line Activator Furnaces #5 & #6
Feed Bin to C-Line Activator Transfer Elevators (4)
Multiple Burners (24.0 mmBtu/hr total)
Natural Gas
Total Capacity: 4.0 tons/hour Devolatized Carbon Granules
Constructed: 1965
8760 hours/year

Controls: Wet Scrubber (PM/PM_{10}, SO_2)
D.R. Technologies
2-stage Venturi Spray
Minimum Pressure Drop: 8 in. H_2O
Minimum Liquid Flow: 1200 gpm

Direct Flame Afterburner (VOC)
Integrated into each Activator Furnace (i.e.: top burner section of furnace)
Natural Gas

APPLICABLE REGULATIONS:

401 KAR 50:012, *General Application*, applies to the emissions of volatile organic compounds from the C-Line Activators.

401 KAR 53:005, *General provisions* was applied to this emission point in order to meet NAAQS for sulfur dioxide.

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the C-Line Activators.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter and sulfur dioxide from the C-Line Activators.

1. Operating Limitations:

The total weight of carbon processed through each individual C-Line Activator shall not exceed 2.0 tons per hour and 17,520 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly carbon throughput = [Total weight of carbon processed through the C-Line Activators each month] ÷ [Total hours of operation of the C-Line Activators during the month].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

21 (C-04, 05) C-Line Activator Furnaces #5 & #6 (Continued)

2. Emission Limitations:

a. Emissions of particulate matter from each individual C-Line Activators shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of carbon processed through each individual C-Line Activator (i.e.: The hourly carbon throughput rate determined in **1.b.**, above.).

b. The opacity of visible emissions from each individual C-Line Activator shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

c. Emissions of SO_2 from both C-Line Activators combined shall not exceed 7.72 lbs/hr and 33.8 tons during any consecutive 12 months [401 KAR 53:005, and Permit V-00-015 (Revision 2)].

d. The afterburners shall control emissions of volatile organic compounds and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the C-Line Activators are in operation [401 KAR 50:012, Section 1 (1)]. The C-Line Activators are considered in operation any time carbon is being conveyed to the Activators.

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM / SO_2 Emission Rate = [(25.903 lbs PM/ton carbon granules processed x (1-0.90)), (19.290 lb SO_2/ton carbon granules processed x (1-0.90)), or emission factor observed during last stack test (in pounds PM / SO_2 per ton carbon)] x [The hourly carbon throughput rate determined in **1.b.**, above].

(2) The wet scrubber associated with the C-Line Activators shall control emissions of particulate matter and sulfur dioxide and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the C-Line Activators are in operation. The permittee is required to use the wet scrubber associated with the C-Line Activators in order to maintain NAAQS emission standards for sulfur dioxide.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding wet scrubber use.

b. Annual Mass Emission Standard:
The total emissions of sulfur dioxide from the C-Line Activators shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

21 (C-04, 05) C-Line Activator Furnaces #5 & #6 (Continued)

c. Opacity Limit:

(1) During periods of normal operation of the wet scrubber, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the C-Line Activators are in operation during any period of malfunction of the associated wet scrubber, the permittee shall determine compliance through maintenance of the records required by paragraph **5.f.** below.

d. Use of Afterburner:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of carbon processed at the C-Line Activators each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of operation of the C-Line Activators per month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the C-Line Activator scrubber once per week during operation of the C-Line Activators. The weekly inspection shall consist of the visual emissions observation as outlined in paragraph **5.f.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the temperature in the combustion chamber of the afterburners.

e. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements for the wet scrubber:

(1) The permittee shall monitor the continuous measurement of the pressure loss of waste gas stream through the wet scrubber to ensure it is at least 8 in. H_20 based on a 3-hour average, and the minimum total flow rate of liquid to the scrubber to ensure it is at least 1200 gpm based on a 3-hour average. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device(s) used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location(s), installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure loss of waste gas stream through the wet scrubber and the minimum total scrubbing liquid flow rate shall be made at least once per 24-hour period during

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

21 (C-04, 05) C-Line Activator Furnaces #5 & #6 (Continued)

operation of the C-Line Activators. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs when any 3-hour period during which the average pressure loss of waste gas stream through the wet scrubber or the average flow rate of scrubbing liquid to the scrubber was below the minimums specified in paragraph **4.e.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of carbon processed at the C-Line Activators each month.

b. Each month, the permittee shall record the total weight of carbon processed at the C-Line Activators during the previous 12 months.

c. The permittee shall record the total hours of operation of the C-Line Activators each month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. The permittee shall keep records of the continuous measurement of the temperature in the combustion chamber of the afterburner.

f. During all periods of malfunction of the wet scrubber, if the C-Line Activators are in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the wet scrubber stack;

(2) Whether the visible emissions were normal for the wet scrubber stack.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the C-Line Activators wet scrubber stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

g. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the C-Line Activators are in operation but the corresponding afterburner is not in operation.

h. The permittee shall record all maintenance activities performed at the wet scrubber and afterburner.

i. The following recordkeeping requirements are included to fulfill CAM for the wet scrubber:

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

21 (C-04, 05) C-Line Activator Furnaces #5 & #6 (Continued)

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);
(ii) The date(s) analyses (i.e.: Testing) were performed;
(iii) The company or entity that performed the analyses;
(iv) The analytical techniques or methods used;
(v) The results of such analyses; and
(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the average pressure loss of waste gas stream through the wet scrubber, and the average flow rate of scrubbing liquid to the scrubber), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter, sulfur dioxide, and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the C-Line Activators are in operation but the associated wet scrubber is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM for the wet scrubber:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

21 (C-04, 05) C-Line Activator Furnaces #5 & #6 (Continued)

downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

The C-Line Activator afterburners shall operate at a minimum temperature of 1400°F (3-hour average). An **excursion** from the operating range specified is any 3-hour period during which the average temperature in the afterburners was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

22 (C-06) C-Line Packaging Operations
Baker to Activator Discharge Elevator (*formerly from Baker #6, retained as dump-back elevator for totes*)
Capacity: 4.0 tons/hour Granular Activated Product
Constructed: 1968
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
W.W. Sly Manufacturing Company
Dynaclone No. 12, Type A
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1968

APPLICABLE REGULATIONS:

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the C-Line Packaging operations.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the C-Line Packaging operations.

1. Operating Limitations:

The total weight of activated carbon processed at the C-Line Packaging operations shall not exceed 4.0 tons per hour and 35,040 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly activated carbon throughput = [Total weight of activated carbon processed at the C-Line Packaging operations each month] ÷ [Total hours of activated carbon processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the C-Line Packaging operations shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of activated carbon processed at the C-Line Packaging operations (i.e.: The hourly activated carbon throughput rate determined in paragraph **1.b.**, above).
b. The opacity of visible emissions from the C-Line Packaging operations shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

22 (C-06) C-Line Packaging Operations (Continued)

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(259.481 lbs PM/per ton activated carbon x (1-0.99)), or emission factor observed during last stack test* (in pounds PM/per ton activated carbon)] x [The hourly activated carbon throughput rate determined in paragraph **1.b.**, above.]

(*Alternate emission factor may be established based on demonstration of similarity to other tested sources and/or estimated using credible engineering judgment based on conservative assumptions.)

(2) The baghouse associated with the C-Line Packaging operations shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the C-Line Packaging unit is in operation. The permittee is required to use the baghouse associated with the C-Line Packaging operations in order meet the particulate matter emission standard for the C-Line Packaging operations.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the C-Line Packaging unit is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of activated carbon processed at the C-Line Packaging operations each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of activated carbon processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the C-Line Packaging baghouse once per week during C-Line Packaging operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

22 (C-06) C-Line Packaging Operations (Continued)

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the C-Line Packaging baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the C-Line Packaging baghouse shall be made at least once per 24-hour period during C-Line Packaging operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of activated carbon processed at the C-Line Packaging operations each month.

b. Each month, the permittee shall record the total weight of activated carbon processed at the C-Line Packaging operations during the previous 12 months.

c. The permittee shall record the total hours of C-Line Packaging operations during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the C-Line Packaging unit is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the C-Line Packaging operations stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

22 (C-06) C-Line Packaging Operations (Continued)

f. All maintenance activities performed at the baghouse.

g. If an emission factor from other than listed above in **Compliance Demonstration Method 2.a.** is used, the permittee shall record the emission factor, its supporting assumptions, and calculations.

h. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the C-Line Packaging unit is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

C. C-LINE:

22 (C-06) C-Line Packaging Operations (Continued)

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

24 (M-07) Temporary Package Boiler (Originally permitted as EP 64. Renumbered with this permit to accommodate coal silo Insignificant Activities)
Rating: 27.0 mmBtu/hr
Fuel: Natural gas only
Date of construction: 2002

APPLICABLE REGULATIONS:
401 KAR 59:015, *New indirect heat exchangers*, applies to the Temporary Package Boiler.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, applies to the Temporary Package Boiler.

1. Operating Limitations:
None.

2. Emission Limitations:

a. Emissions of particulate matter shall not exceed 0.325 lb/mmBtu [401 KAR 59:015, Section 4(1)(c)].

b. Emissions of sulfur dioxide shall not exceed 1.166 lb/mmBtu [401 KAR 59:015, Section 5(1)(c)].

c. The opacity of visible emissions shall not exceed 20 percent [401 KAR 59:015, Section 4 (2)] except as provided below:

(1) Pursuant to 401 KAR 59:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.

(2) Pursuant to 401 KAR 59:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

(3) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method:

a. Mass Emission Limits:
The Package Boiler shall be deemed to be in compliance with the applicable mass emission standards (lb/mmBtu) for particulate matter and sulfur dioxide while natural gas is the only fuel used.

b. Opacity Limit:
The Package Boiler shall be deemed to be in compliance with the applicable visible emission standard while natural gas is the only fuel used.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

24 (M-07) Temporary Package Boiler (Continued)

3. Testing Requirements:
Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:
The permittee shall monitor the natural gas consumption of the Package boiler. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:
The permittee shall record and maintain records of the amount of natural gas combusted during each day. [40 CFR 60.48c(g)]

6. Specific Reporting Requirements:
None.

7. Specific Control Equipment Operating Conditions:
Not applicable.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

25 (M-03) Acid Wash Transfer and Packaging System
Consisting of the following equipment that vents to the baghouse:
Acid Wash Product Cooler Elevator
Screener
On-Size Elevator
Eight (8) Product Bins
Two (2) Packaging Machines
Two (2) Dedusters
Vibratory Conveyor
Three (3) Charge Bins
Capacity: 4.0 tons/hour Granular Activated Product
Constructed: 1966
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
Amerex
RP10-256-D6
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1966

APPLICABLE REGULATIONS:

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the Acid Wash Transfer and Packaging System.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the Acid Wash Transfer and Packaging System.

1. Operating Limitations:

None.

2. Emission Limitations:

a. Emissions of particulate matter from the Acid Wash Transfer and Packaging System shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of activated carbon processed at the Acid Wash Transfer and Packaging System (i.e.: [Amount of activated carbon processed at the Acid Wash Transfer and Packaging System per month] ÷ [Total hours of Acid Wash Transfer and Packaging System operation during the month]).

b. Emissions of particulate matter from the Acid Wash Transfer and Packaging System shall not exceed 5.26 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

c. The opacity of visible emissions from the Acid Wash Transfer and Packaging System shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

25 (M-03) Acid Wash Transfer and Packaging System (Continued)

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(30.023 lbs PM/per ton activated carbon x (1-0.99)), or emission factor observed during last stack test (in pounds PM/per ton activated carbon)] x [The hourly activated carbon throughput rate determined in paragraph **2.a.**, above.]

(2) The baghouse associated with the Acid Wash Transfer and Packaging System shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the Acid Wash Transfer and Packaging System is in operation. The permittee is required to use the baghouse associated with the Acid Wash Transfer and Packaging System operations in order meet the particulate matter emission standard for the Acid Wash Transfer and Packaging System.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter from the Acid Wash Transfer and Packaging System shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the Acid Wash Transfer and Packaging System is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.d.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of activated carbon processed at the Acid Wash Transfer and Packaging System each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of activated carbon processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the Acid Wash Transfer and Packaging System baghouse once per week during Acid Wash Transfer and Packaging System operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

25 (M-03) Acid Wash Transfer and Packaging System (Continued)

visual emissions observation as outlined in paragraph **5.d.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the Acid Wash Transfer and Packaging System baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the Acid Wash Transfer and Packaging System baghouse shall be made at least once per 24-hour period during Acid Wash Transfer and Packaging System operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of activated carbon processed at the Acid Wash Transfer and Packaging System each month.

b. The permittee shall record the total hours of Acid Wash Transfer and Packaging System operations during the month.

c. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

d. During all periods of malfunction of the baghouse, if the Acid Wash Transfer and Packaging System unit is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the Acid Wash Transfer and Packaging System stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

25 (M-03) Acid Wash Transfer and Packaging System (Continued)

The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

e. All maintenance activities performed at the baghouse.

f. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the Acid Wash Transfer and Packaging System is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

25 (M-03) Acid Wash Transfer and Packaging System (Continued)

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

26 (M-04) Acid Wash Process
Consisting of the following equipment that vents to the baghouse:
Natural gas fired Rotary Dryer (15.0 mmBtu/hr)
Five (5) Acid Wash Reactors
Two (2) Batch Dewatering Bins
Two (2) Dryer Feed Bins
E-Line to Acid Wash Process Transfer Conveyor
Capacity: 4.0 tons/hour Dried Activated Carbon
Constructed: 1966
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
Staclean
320-10-ADR
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1990

APPLICABLE REGULATIONS:
401 KAR 53:005, *General provisions* was applied to this emission point in order to meet NAAQS for sulfur dioxide.

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the Acid Wash Process.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the Acid Wash Process.

1. Operating Limitations:
The total weight of activated carbon processed at the Acid Wash Process shall not exceed 4.0 tons per hour and 35,040 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:
a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly activated carbon throughput = [Total weight of activated carbon processed at the Acid Wash Process each month] ÷ [Total hours of activated carbon processing during the month].

2. Emission Limitations:
a. Emissions of particulate matter from the Acid Wash Process shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of activated carbon processed at the Acid Wash Process (i.e.: The hourly activated carbon throughput rate determined in **1.b.**, above).

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

26 (M-04) Acid Wash Process (Continued)

b. Emissions of SO_2 from the Acid Wash Process shall not exceed 1.278 lb/hr and 5.598 tons during any consecutive 12 months [401 KAR 53:005, and Permit V-00-015 (Revision 2)].

c. Emissions of particulate matter from the Acid Wash Process shall not exceed 7.88 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

d. The opacity of visible emissions from the Acid Wash Process shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(44.952 lbs PM/per ton activated carbon x (1-0.99)), or emission factor observed during last stack test (in pounds PM/per ton activated carbon)] x [The hourly activated carbon throughput rate determined in **1.b.**, above.]

(2) The baghouse associated with the Acid Wash Process shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the Acid Wash Process is in operation. The permittee is required to use the baghouse associated with the Acid Wash Process operations in order meet the particulate matter emission standard for the Acid Wash Process.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter and sulfur dioxide from the Acid Wash Process shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the Acid Wash Process is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of activated carbon processed at the Acid Wash Process each month. [401 KAR 52:020, Section 10]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

26 (M-04) Acid Wash Process (Continued)

b. The permittee shall monitor the total hours of activated carbon processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the Acid Wash Process baghouse once per week during Acid Wash Process operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the Acid Wash Process baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the Acid Wash Process baghouse shall be made at least once per 24-hour period during Acid Wash Process operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of activated carbon processed at the Acid Wash Process each month.

b. Each month, the permittee shall record the total weight of activated carbon processed at the Acid Wash Process operations during the previous 12 months.

c. The permittee shall record the total hours of Acid Wash Process operations during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the Acid Wash Process unit is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

26 (M-04) Acid Wash Process (Continued)

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the Acid Wash Process stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the Acid Wash Process is in operation but the baghouse is not in operation.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

26 (M-04) Acid Wash Process (Continued)

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

27 (--) Lime Storage Silo
Capacity: 5.936 tons/hour Lime Slurry
Constructed: 1990
8760 hrs/yr

Controls: Bin Vent Filter (PM/PM_{10})
Flex Kleen
84-BVBS-16 (IIG)
Pressure Drop: 17.0 in. H_2O
Constructed: 1990

APPLICABLE REGULATIONS:
401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the Lime Storage Silo.

1. Operating Limitations:
None.

2. Emission Limitations:

a. Emissions of particulate matter from the Lime Storage Silo shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of lime loaded into the Lime Storage Silo (i.e.: [Amount of lime loaded into the Lime Storage Silo per month] ÷ [Total hours of lime loading during the month]).

b. Emissions of particulate matter from the Lime Storage Silo shall not exceed 1.86 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

c. The opacity of visible emissions from the Lime Storage Silo shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(3.577 lbs PM/per ton lime loaded x (1-0.98)), or emission factor observed during last stack test or estimated using credible engineering judgment based on conservative assumptions (in pounds PM/per ton lime loaded)] x [The hourly activated carbon throughput rate determined in paragraph **2.a.**, above.]

(2) The bin vent filter associated with the Lime Storage Silo shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the Lime Storage Silo is in operation. The permittee is required to use the bin vent filter associated with the Lime Storage Silo operations

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

27 (--) Lime Storage Silo (Continued)

in order meet the particulate matter emission standard for the Lime Storage Silo.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter from the Lime Storage Silo shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the bin vent filter, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the Lime Storage Silo is in operation during any period of malfunction of its associated bin vent filter, the permittee shall determine compliance through maintenance of the records required by paragraph **5.d.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of lime loaded into the Lime Storage Silo each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of lime loading during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the Lime Storage Silo bin vent filter once per week during Lime Storage Silo operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.d.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specification a monitoring device for the continuous measurement of the pressure loss of the gas stream through the Lime Storage Silo bin vent filter. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of lime loaded into the Lime Storage Silo each month.

b. The permittee shall record the total hours of Lime Storage Silo operations during the month.

c. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

27 (--) Lime Storage Silo (Continued)

d. During all periods of malfunction of the bin vent filter, if the Lime Storage Silo is in operation, a daily (calendar day) log of the following information shall be kept:
   (1) Whether any air emissions were visible from the bin vent filter stack;
   (2) Whether the visible emissions were normal for the bin vent filter.
   (3) The cause of any abnormal emissions and any corrective action taken.
   (4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the Lime Storage Silo stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

e. The permittee shall record a daily reading of the pressure loss of the gas stream through the bin vent filter as indicated by the continuous monitor.

f. The permittee shall record all maintenance activities performed at the bin vent filter.

6. Specific Reporting Requirements:

The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

a. Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

b. The occurrence, duration, cause, and any corrective action taken for each incident when the Lime Storage Silo is in operation but the bin vent filter is not in operation.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

29 (D-04) D-Line Coal and Pitch Preparation Area
D-Line Preparation Area to Baker Elevator
D-Line and E-Line Preparation Area Transfer Elevator
Capacity: 9.0 tons/hour Processed Coal
Constructed: 1972
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
W.W. Sly Manufacturing Company
Dynaclone No. 12
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1972

APPLICABLE REGULATIONS:

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the D-Line Coal and Pitch Preparation operations.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the D-Line Coal and Pitch Preparation operations.

1. Operating Limitations:

The total weight of coal processed at the D-Line Coal and Pitch Preparation operations shall not exceed 9.0 tons per hour and 61,500 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly coal throughput = [Total weight of coal processed at the D-Line Coal and Pitch Preparation Area each month] ÷ [Total hours of coal processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the D-Line Coal and Pitch Preparation operations shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of coal processed at the D-Line Coal and Pitch Preparation operations (i.e.: The hourly coal throughput rate determined in **1.b.**, above).
b. Emissions of particulate matter from the D-Line Coal and Pitch Preparation operations shall not exceed 61.06 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].
c. The opacity of visible emissions from the D-Line Coal and Pitch Preparation operations shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

29 (D-04) D-Line Coal and Pitch Preparation Area (Continued)

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(198.579 lbs PM/ton coal processed x (1-0.99)), or emission factor observed during last stack test (in pounds PM/per ton coal)] x [The hourly coal throughput rate determined in **1.b.**, above].

(2) The baghouse associated with the D-Line Coal and Pitch Preparation operations shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the D-Line Coal and Pitch Preparation Area is in operation. The permittee is required to use the baghouse associated with the D-Line Coal and Pitch Preparation operations in order meet the particulate matter emission standard for the D-Line Coal and Pitch Preparation operations.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter from the D-Line Coal and Pitch Preparation operations shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the D-Line Coal and Pitch Preparation Area is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

b. EPA Reference Method 5, or equivalent, shall be performed within six (6) months of the date of the issuance of the final permit to determine the amount of particulate matter emissions per ton of material processed.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of coal processed at the D-Line Coal and Pitch Preparation Area each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of coal processing during the month. [401 KAR 52:020, Section 10]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

29 (D-04) D-Line Coal and Pitch Preparation Area (Continued)

c. The permittee shall visually inspect the D-Line Coal and Pitch Preparation Area baghouse once per week during operation of the D-Line Coal and Pitch Preparation Area. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the D-Line Coal and Pitch Preparation Area baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the D-Line Coal and Pitch Preparation Area baghouse shall be made at least once per 24-hour period during operation of the D-Line Coal and Pitch Preparation Area. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of coal processed at the D-Line Coal and Pitch Preparation Area each month.

b. Each month, the permittee shall record the total weight of coal processed at the D-Line Coal and Pitch Preparation Area during the previous 12 months.

c. The permittee shall record the total hours of coal processing during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the D-Line Coal and Pitch Preparation Area is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

29 (D-04) D-Line Coal and Pitch Preparation Area (Continued)

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the D-Line Coal and Pitch Preparation Area stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

29 (D-04) D-Line Coal and Pitch Preparation Area (Continued)

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the D-Line Coal and Pitch Preparation Area is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

31 (D-05) Two (2) D-Line Bakers
D-Line 1st Pass Baker to D-Line 2nd Pass Baker Drag Conveyor
D-Line Baker to Activators Elevator
Urea Injection Provision for Custom Product
Capacity: 9.24 tons/hour Processed Coal Granules
Constructed: 1972
8760 hrs/yr

Controls: Wet Scrubber (PM/PM_{10}, SO_2)
Emtrol
3-Stage Impinge. Tray
Press. Drop: 11 –13 in. H_20
Min. Liq. Flow: 250 gpm

Dir. Flame Afterburner (VOC)
Bigelow & Liptack
Model 66-032-25
Two (2) 75-mmBtu/hour burners
Primary Fuel: Natural Gas
Secondary Fuel: #2 Fuel Oil

APPLICABLE REGULATIONS:

401 KAR 50:012, *General Application*, applies to the emissions of volatile organic compounds from the D-Line Bakers.

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the D-Line Bakers.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter and sulfur dioxide from the D-Line Bakers.

1. Operating Limitations:

The total weight of coal processed through the D-Line Bakers shall not exceed 9.24 tons per hour and 68,328 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1) and V-00-015 (Revision 2)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly coal throughput = [Total weight of coal processed at the D-Line Bakers each month] ÷ [Total hours of operation of the D-Line Bakers during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the D-Line Bakers shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

31 (D-05) Two (2) D-Line Bakers (Continued)

For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of coal processed at the D-Line Bakers (i.e.: The hourly coal throughput rate determined in **1.b.**, above).

b. The opacity of visible emissions from the D-Line Bakers shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

c. Emissions of sulfur dioxide from the D-Line Bakers shall not exceed 15.0 lb/hr and 65.7 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

d. The afterburner associated with the D-Line Bakers shall control emissions of volatile organic compounds (VOC) and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the D-Line Bakers are in operation [401 KAR 50:012, Section 1 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM / SO_2 Emission Rate = [(13.001 lbs PM/ton coal granules processed x (1-0.85)), (6.484 lb SO_2/ton coal granules processed x (1-0.75)), or emission factor observed during last stack test (in pounds PM / SO_2 per ton coal)] x [The hourly coal throughput rate determined in **1.b.**, above].

(2) The wet scrubber associated with the D-Line Bakers shall control emissions of particulate matter and sulfur dioxide and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the D-Line Bakers are in operation. The permittee is required to use the wet scrubber associated with the D-Line Bakers in order meet the applicable emission standards for particulate matter and sulfur dioxide.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding wet scrubber use.

b. Annual Mass Emission Standard:

The total emissions of sulfur dioxide from the D-Line Bakers shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the wet scrubber, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the D-Line Bakers are in operation during any period of malfunction of the associated wet scrubber, the permittee shall determine compliance through maintenance of the records required by paragraph **5.f.** below.

d. Use of Afterburner:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

31 (D-05) Two (2) D-Line Bakers (Continued)

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

b. EPA Reference Method 5 and 6, or equivalent, shall be performed within six (6) months of the date of the issuance of the final permit to determine the amount of particulate matter and sulfur dioxide emissions per ton of material processed.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of coal processed at the D-Line Bakers each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of coal processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the D-Line Bakers scrubber once per week during operation of the D-Line Bakers. The weekly inspection shall consist of the visual emissions observation as outlined in paragraph **5.f.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the temperature in the combustion chamber of the afterburner.

e. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements for the wet scrubber:

(1) The permittee shall monitor the continuous measurement of the minimum total flow rate of liquid to the scrubber to ensure it is at least 250 gpm based on a 3-hour average. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the minimum total scrubbing liquid flow rate shall be made at least once per 24-hour period during operation of the D-Line Bakers. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs when any 3-hour period during which the average flow rate of scrubbing liquid to the scrubber was below the minimum specified in paragraph **4.e.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

31 (D-05) Two (2) D-Line Bakers (Continued)

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of coal processed at the D-Line Bakers each month.

b. Each month, the permittee shall record the total weight of coal processed at the D-Line Bakers during the previous 12 months.

c. The permittee shall record the total hours of operation of the D-Line Bakers each month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. The permittee shall keep records of the continuous measurement of the temperature in the combustion chamber of the afterburner.

f. During all periods of malfunction of the wet scrubber, if the D-Line Bakers are in operation, a daily (calendar day) log of the following information shall be kept:
   (1) Whether any air emissions were visible from the wet scrubber stack;
   (2) Whether the visible emissions were normal for the wet scrubber stack.
   (3) The cause of any abnormal emissions and any corrective action taken.
   (4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the D-Line Bakers wet scrubber stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

g. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the D-Line Bakers are in operation but the corresponding afterburner is not in operation.

h. The permittee shall record all maintenance activities performed at the wet scrubber and afterburner.

i. The permittee shall record the quantity of urea utilized during the manufacture of custom product, and the manufacturing schedule for the custom product runs. [Permit V-00-015]

j. The following recordkeeping requirements are included to fulfill CAM for the wet scrubber:
   (1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]
      (i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);
      (ii) The date(s) analyses (i.e.: Testing) were performed;
      (iii) The company or entity that performed the analyses;
      (iv) The analytical techniques or methods used;
      (v) The results of such analyses; and
      (vi) The operating conditions as existing at the time of sampling or measurement.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

31 (D-05) Two (2) D-Line Bakers (Continued)

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the average flow rate of scrubbing liquid to the scrubber), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter, sulfur dioxide, and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the D-Line Bakers are in operation but the associated wet scrubber is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM for the wet scrubber:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

31 (D-05) Two (2) D-Line Bakers (Continued)

7. Specific Control Equipment Operating Conditions:

The D-Line Baker afterburner shall operate at a minimum temperature of 1400°F (3-hour average). An **excursion** from the operating range specified is any 3-hour period during which the average temperature in the afterburner was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

32 (D-12, 13) D-Line Baker Heater
North American
Capacity: 20 mmBtu/hour
Natural Gas
Constructed: 1972
8760 hrs/yr

APPLICABLE REGULATIONS:

401 KAR 53:005, *General provisions* was applied to this emission point in order to meet NAAQS for sulfur dioxide.

401 KAR 59:015, *New indirect heat exchangers*, applies to the emissions of particulate matter and sulfur dioxide from the D-Line Baker Heater.

1. Operating Limitations: None.

2. Emission Limitations:

a. Emissions of particulate matter from the D-Line Baker Heater shall not exceed 0.35 lb/mmBtu [401 KAR 59:015, Section 4 (1)].

b. Emissions of sulfur dioxide from the D-Line Baker Heater shall not exceed 0.0853 lb/mmBtu [401 KAR 53:005, and Permit V-00-015 (Revision 2)].

c. The opacity of visible emissions from the D-Line Baker Heater shall not exceed 20 percent [401 KAR 59:015, Section 4 (2)] except as provided below:

(1) Pursuant to 401 KAR 59:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.

(2) Pursuant to 401 KAR 59:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

(3) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method:

a. Mass Emission Limits:
For particulate matter and sulfur dioxide, compliance is demonstrated for the applicable emission standards (lb/mmBtu) while natural gas is the only fuel used.

b. Opacity Limits:
Compliance is demonstrated for the applicable opacity standard while natural gas is the only fuel used.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

32 (D-12, 13) D-Line Baker Heater (Continued)

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

The permittee shall monitor the fuel consumption of natural gas at the D-Line Baker Heater. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the fuel consumption of natural gas at the D-Line Baker Heater.

6. Specific Reporting Requirements:

None.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

34 (D-08, 09) D-Line Activator Furnaces #7 & #8 (Activator Furnace #7 incorporates a waste heat boiler between the integrated afterburner and the wet scrubber)
Feed Bin to D-Line Activator Transfer Elevators (2)
Multiple Burners (30.0 mmBtu/hr total)
Natural Gas
Total Capacity: 8.1 tons/hour Devolatized Carbon Granules
Constructed: 1972
8760 hours/year

Controls: Wet Scrubber (PM/PM_{10}, SO_2)
D.R. Technologies
Variable Venturi Spray
Minimum Pressure Drop: 6.0 in. H_2O
Min. Liquid Flow: 350 gpm

Direct Flame Afterburner (VOC)
Integrated into each Activator Furnace (i.e.: top burner section of furnace)
Natural Gas

APPLICABLE REGULATIONS:

401 KAR 50:012, *General Application*, applies to the emissions of volatile organic compounds from the D-Line Activators.

401 KAR 53:005, *General provisions* was applied to this emission point in order to meet NAAQS for sulfur dioxide.

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the D-Line Activators.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter and sulfur dioxide from the D-Line Activators.

1. Operating Limitations:

The total weight of carbon processed through each individual D-Line Activator shall not exceed 4.05 tons per hour and 35,478 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly carbon throughput = [Total weight of carbon processed through the D-Line Activators each month] ÷ [Total hours of operation of the D-Line Activators during the month].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

34 (D-08, 09) D-Line Activator Furnaces #7 & #8 (Continued)

2. Emission Limitations:

a. Emissions of particulate matter from each individual D-Line Activator shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of carbon processed through each individual D-Line Activator (i.e.: The hourly carbon throughput rate determined in **1.b.**, above.).

b. Emissions of particulate matter from *each* individual D-Line Activator shall not exceed 32.85 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

c. The opacity of visible emissions from each individual D-Line Activator shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

d. Emissions of SO_2 from both D-Line Activators combined shall not exceed 15.0 lbs/hr and 65.7 tons during any consecutive 12 months [401 KAR 53:005, and Permit V-00-015 (Revision 2)].

e. The afterburners shall control emissions of volatile organic compounds and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the D-Line Activators are in operation [401 KAR 50:012, Section 1 (1)]. The D-Line Activators are considered in operation any time carbon is being conveyed to the Activators.

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM / SO_2 Emission Rate = [(12.318 lbs PM/ton carbon granules processed x (1-0.85)), (7.405 lb SO_2/ton carbon granules processed x (1-0.75)), or emission factor observed during last stack test (in pounds PM / SO_2 per ton coal)] x [The hourly coal throughput rate determined in **1.b.**, above].

(2) The wet scrubber associated with the D-Line Activators shall control emissions of particulate matter and sulfur dioxide and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the D-Line Activators are in operation. The permittee is required to use the wet scrubber associated with the D-Line Activators in order meet the applicable emission standards for particulate matter and sulfur dioxide.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding wet scrubber use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter and sulfur dioxide from the D-Line Activators shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

34 (D-08, 09) D-Line Activator Furnaces #7 & #8 (Continued)

c. Opacity Limit:
   (1) During periods of normal operation of the wet scrubber, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.
   (2) If the D-Line Activators are in operation during any period of malfunction of the associated wet scrubber, the permittee shall determine compliance through maintenance of the records required by paragraph **5.f.** below.

d. Use of Afterburner:
   See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

b. EPA Reference Method 5 and 6, or equivalent, shall be performed within six (6) months of the date of the issuance of the final permit to determine the amount of particulate matter and sulfur dioxide emissions per ton of material processed.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of carbon processed at the D-Line Activators each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of operation of the D-Line Activators per month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the D-Line Activator scrubber once per week during operation of the D-Line Activators. The weekly inspection shall consist of the visual emissions observation as outlined in paragraph **5.f.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the temperature in the combustion chamber of the afterburners.

e. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements for the wet scrubber:
   (1) The permittee shall monitor the continuous measurement of the pressure loss of waste gas stream through the wet scrubber to ensure it is at least 6.0 in. H_20 based on a 3-hour average, and the minimum total flow rate of liquid to the scrubber to ensure it is at least 350 gpm based on a 3-hour average. [40 CFR 64.6(c)(1)(i)]
   (2) The monitoring device(s) used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]
   (3) The monitoring device location(s), installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

34 (D-08, 09) D-Line Activator Furnaces #7 & #8 (Continued)

(4) A recording of the continuous measurement of the pressure loss of waste gas stream through the wet scrubber and the minimum total scrubbing liquid flow rate shall be made at least once per 24-hour period during operation of the D-Line Activators. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs when any 3-hour period during which the average pressure loss of waste gas stream through the wet scrubber or the average flow rate of scrubbing liquid to the scrubber was below the minimums specified in paragraph **4.e.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of carbon processed at the D-Line Activators each month.

b. Each month, the permittee shall record the total weight of carbon processed at the D-Line Activators during the previous 12 months.

c. The permittee shall record the total hours of operation of the D-Line Activators each month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. The permittee shall keep records of the continuous measurement of the temperature in the combustion chamber of the afterburner.

f. During all periods of malfunction of the wet scrubber, if the D-Line Activators are in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the wet scrubber stack;

(2) Whether the visible emissions were normal for the wet scrubber stack.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the D-Line Activators wet scrubber stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

g. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the D-Line Activators in operation but the corresponding afterburner is not in operation.

h. The permittee shall record all maintenance activities performed at the wet scrubber and afterburner.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

34 (D-08, 09) D-Line Activator Furnaces #7 & #8 (Continued)

i. The following recordkeeping requirements are included to fulfill CAM for the wet scrubber:

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the average pressure loss of waste gas stream through the wet scrubber, and the average flow rate of scrubbing liquid to the scrubber), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter, sulfur dioxide, and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the D-Line Activators are in operation but the associated wet scrubber is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM for the wet scrubber:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

34 (D-08, 09) D-Line Activator Furnaces #7 & #8 (Continued)

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

The D-Line Activator afterburners shall operate at a minimum temperature of 1400°F (3-hour average). An **excursion** from the operating range specified is any 3-hour period during which the average temperature in the afterburners was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

35 (D-10) D-Line Packaging Operations
Capacity: 5.0 tons/hour Granular Activated Product
Constructed: 1972
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
W.W. Sly Manufacturing Company
Dynaclone No. 11, Type A
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1972

APPLICABLE REGULATIONS:

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the D-Line Packaging operations.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the D-Line Packaging operations.

1. Operating Limitations:

The total weight of activated carbon processed at the D-Line Packaging operations shall not exceed 5.0 tons per hour and 43,800 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly activated carbon throughput = [Total weight of activated carbon processed at the D-Line Packaging operations each month] ÷ [Total hours of activated carbon processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the D-Line Packaging operations shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of activated carbon processed at the D-Line Packaging operations (i.e.: The hourly activated carbon throughput rate determined in paragraph **1.b.**, above).
b. The opacity of visible emissions from the D-Line Packaging operations shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:
(1) Actual PM Emission Rate = [(241.059 lbs PM/per ton activated carbon x (1-0.99)), or emission factor observed during last stack test* (in pounds

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

35 (D-10) D-Line Packaging Operations (Continued)

PM/per ton activated carbon)] x [The hourly activated carbon throughput rate determined in paragraph **1.b.**, above.]

(*Alternate emission factor may be established based on demonstration of similarity to other tested sources and/or estimated using credible engineering judgment based on conservative assumptions.)

(2) The baghouse associated with the D-Line Packaging operations shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the D-Line Packaging is in operation. The permittee is required to use the baghouse associated with the D-Line Packaging operations in order meet the particulate matter emission standard for the D-Line Packaging operations.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the D-Line Packaging unit is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of activated carbon processed at the D-Line Packaging operations each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of activated carbon processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the D-Line Packaging baghouse once per week during D-Line Packaging operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the D-Line Packaging baghouse to ensure it

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

35 (D-10) D-Line Packaging Operations (Continued)

is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the D-Line Packaging baghouse shall be made at least once per 24-hour period during D-Line Packaging operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of activated carbon processed at the D-Line Packaging operations each month.

b. Each month, the permittee shall record the total weight of activated carbon processed at the D-Line Packaging operations during the previous 12 months.

c. The permittee shall record the total hours of D-Line Packaging operations during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the D-Line Packaging unit is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the D-Line Packaging operations stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. If an emission factor from other than listed above in **Compliance Demonstration Method 2.a.** is used, the permittee shall record the emission factor, its supporting assumptions, and calculations.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

35 (D-10) D-Line Packaging Operations (Continued)

h. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the D-Line Packaging unit is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D. D-LINE:

35 (D-10) D-Line Packaging Operations (Continued)

downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

37 (E-01) E-Line Coal and Pitch Preparation Area
E-Line Preparation Area Transfer Elevator
Capacity: 9.0 tons/hour Processed Coal
Constructed: 02/01/1975
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
W.W. Sly Manufacturing Company
Dynaclone No. 28-A
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1975

APPLICABLE REGULATIONS:

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the E-Line Coal and Pitch Preparation operations.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the E-Line Coal and Pitch Preparation operations.

1. Operating Limitations:

The total weight of coal processed at the E-Line Coal and Pitch Preparation operations shall not exceed 9.0 tons per hour and 61,500 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.

b. Hourly coal throughput = [Total weight of coal processed at the E-Line Coal and Pitch Preparation Area each month] ÷ [Total hours of coal processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the E-Line Coal and Pitch Preparation operations shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of coal processed at the E-Line Coal and Pitch Preparation operations (i.e.: The hourly coal throughput rate determined in **1.b.**, above).

b. Emissions of particulate matter from the E-Line Coal and Pitch Preparation operations shall not exceed 61.06 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

c. The opacity of visible emissions from the E-Line Coal and Pitch Preparation operations shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

37 (E-01) E-Line Coal and Pitch Preparation Area (Continued)

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(198.579 lbs PM/ton coal processed x (1-0.99)), or emission factor observed during last stack test (in pounds PM/per ton coal)] x [The hourly coal throughput rate determined in **1.b.**, above].

(2) The baghouse associated with the E-Line Coal and Pitch Preparation operations shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the E-Line Coal and Pitch Preparation Area is in operation. The permittee is required to use the baghouse associated with the E-Line Coal and Pitch Preparation operations in order meet the particulate matter emission standard for the E-Line Coal and Pitch Preparation operations.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter from the E-Line Coal and Pitch Preparation operations shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the E-Line Coal and Pitch Preparation Area is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

b. EPA Reference Method 5, or equivalent, shall be performed within six (6) months of the date of the issuance of the final permit to determine the amount of particulate matter per ton of material processed.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of coal processed at the E-Line Coal and Pitch Preparation Area each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of coal processing during the month. [401 KAR 52:020, Section 10]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

37 (E-01) E-Line Coal and Pitch Preparation Area (Continued)

c. The permittee shall visually inspect the E-Line Coal and Pitch Preparation Area baghouse once per week during operation of the E-Line Coal and Pitch Preparation Area. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the E-Line Coal and Pitch Preparation Area baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the E-Line Coal and Pitch Preparation Area baghouse shall be made at least once per 24-hour period during operation of the E-Line Coal and Pitch Preparation Area. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of coal processed at the E-Line Coal and Pitch Preparation Area each month.

b. Each month, the permittee shall record the total weight of coal processed at the E-Line Coal and Pitch Preparation Area during the previous 12 months.

c. The permittee shall record the total hours of coal processing during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the E-Line Coal and Pitch Preparation Area is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

37 (E-01) E-Line Coal and Pitch Preparation Area (Continued)

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the E-Line Coal and Pitch Preparation Area stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

37 (E-01) E-Line Coal and Pitch Preparation Area (Continued)

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the E-Line Coal and Pitch Preparation Area is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

39 (E-02) Two (2) E-Line Bakers
E-Line 1st Pass Baker to E-Line 2nd Pass Baker Drag Conveyor
E-Line Baker to Activators Elevator
Urea Injection Provision for Custom Product
Capacity: 7.8 tons/hour Processed Coal Granules
Constructed: 02/01/1975
8760 hrs/yr

Controls: Wet Scrubber (PM/PM_{10}, SO_2)
D.R. Technologies
3-Stage Impinge. Tray
Press. Drop: 11 –13 in. H_20
Min. Liq. Flow: 100 gpm

Dir. Flame Afterburner (VOC)
Bigelow & Liptack
Model 66-047-27
78.5 mmBtu/hour
Primary Fuel: Natural Gas
Secondary Fuel: #2 Fuel Oil

APPLICABLE REGULATIONS:

401 KAR 50:012, *General Application*, applies to the emissions of volatile organic compounds from the E-Line Bakers.

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the E-Line Bakers.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter and sulfur dioxide from the E-Line Bakers.

1. Operating Limitations:

The total weight of coal processed through the E-Line Bakers shall not exceed 7.8 tons per hour and 68,328 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly coal throughput = [Total weight of coal processed at the E-Line Bakers each month] ÷ [Total hours of operation of the E-Line Bakers during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the E-Line Bakers shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

39 (E-02) Two (2) E-Line Bakers (Continued)

For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$

Where E = rate of emissions in lb/hr, and

P = process weight rate in tons/hr of coal processed at the E-Line Bakers (i.e.: The hourly coal throughput rate determined in **1.b.**, above).

b. The opacity of visible emissions from the E-Line Preparation Area to Baker Elevator shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

c. Emissions of sulfur dioxide from the E-Line Bakers shall not exceed 15.0 lb/hr and 65.7 tons during any consecutive 12 months [401 KAR 53:005, and Permit V-00-015 (Revision 2)].

d. The afterburner associated with the E-Line Bakers shall control emissions of volatile organic compounds (VOC) and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the E-Line Bakers are in operation [401 KAR 50:012, Section 1 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM / SO_2 Emission Rate = [(13.802 lbs PM/ton coal granules processed x (1-0.85)), (7.686 lb SO_2/ton coal granules processed x (1-0.75)), or emission factor observed during last stack test (in pounds PM / SO_2 per ton coal)] x [The hourly coal throughput rate determined in **1.b.**, above].

(2) The wet scrubber associated with the E-Line Bakers shall control emissions of particulate matter and sulfur dioxide and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the E-Line Bakers are in operation. The permittee is required to use the wet scrubber associated with the E-Line Bakers in order meet the applicable emission standards for particulate matter and sulfur dioxide.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding wet scrubber use.

b. Annual Mass Emission Standard:

The total emissions of sulfur dioxide from the E-Line Bakers shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the wet scrubber, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the E-Line Bakers are in operation during any period of malfunction of the associated wet scrubber, the permittee shall determine compliance through maintenance of the records required by paragraph **5.f.** below.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

39 (E-02) Two (2) E-Line Bakers (Continued)

d. Use of Afterburner:
See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of coal processed at the E-Line Bakers each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of coal processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the E-Line Bakers scrubber once per week during operation of the E-Line Bakers. The weekly inspection shall consist of the visual emissions observation as outlined in paragraph **5.f.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the temperature in the combustion chamber of the afterburner.

e. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements for the wet scrubber:

(1) The permittee shall monitor the continuous measurement of the minimum total flow rate of liquid to the scrubber to ensure it is at least 100 gpm based on a 3-hour average. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the minimum total scrubbing liquid flow rate shall be made at least once per 24-hour period during operation of the E-Line Bakers. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs when any 3-hour period during which the average flow rate of scrubbing liquid to the scrubber was below the minimum specified in paragraph **4.e.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

39 (E-02) Two (2) E-Line Bakers (Continued)

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of coal processed at the E-Line Bakers each month.

b. Each month, the permittee shall record the total weight of coal processed at the E-Line Bakers during the previous 12 months.

c. The permittee shall record the total hours of operation of the E-Line Bakers each month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. The permittee shall keep records of the continuous measurement of the temperature in the combustion chamber of the afterburner.

f. During all periods of malfunction of the wet scrubber, if the E-Line Bakers are in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the wet scrubber stack;

(2) Whether the visible emissions were normal for the wet scrubber stack.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the E-Line Bakers wet scrubber stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

g. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the E-Line Bakers are in operation but the corresponding afterburner is not in operation.

h. The permittee shall record all maintenance activities performed at the wet scrubber and afterburner.

i. The permittee shall record the quantity of urea utilized during the manufacture of custom product, and the manufacturing schedule for the custom product runs. [Permit V-00-015]

j. The following recordkeeping requirements are included to fulfill CAM for the wet scrubber:

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

39 (E-02) Two (2) E-Line Bakers (Continued)

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the average flow rate of scrubbing liquid to the scrubber), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter, sulfur dioxide, and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the E-Line Bakers are in operation but the associated wet scrubber is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM for the wet scrubber:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

39 (E-02) Two (2) E-Line Bakers (Continued)

7. Specific Control Equipment Operating Conditions:

The E-Line Baker afterburner shall operate at a minimum temperature of 1400°F (3-hour average). An **excursion** from the operating range specified is any 3-hour period during which the average temperature in the afterburner was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

40 (E-09, 10) E-Line Baker Heater
North American
Twenty-one (21) #2 Fuel Oil burners (14 mmBtu/hr)
Four (4) Natural Gas burners (2.7 mmBtu/hr)
Total Capacity: 16.7 mmBtu/hour
Constructed: 02/01/1975
8760 hrs/yr

APPLICABLE REGULATIONS:

401 KAR 53:005, *General provisions* was applied to this emission point in order to meet NAAQS for sulfur dioxide.

401 KAR 59:015, *New indirect heat exchangers,* applies to the emissions of particulate matter and sulfur dioxide from the E-Line Baker Heater.

1. Operating Limitations: None.

2. Emission Limitations:

a. Emissions of particulate matter from the E-Line Baker Heater shall not exceed 0.35 lb/mmBtu [401 KAR 59:015, Section 4 (1)].

b. Emissions of sulfur dioxide from the E-Line Baker Heater shall not exceed 0.477 lb/mmBtu [401 KAR 53:005, and Permit V-00-015 (Revision 2)].

c. The opacity of visible emissions from the E-Line Baker Heater shall not exceed 20 percent [401 KAR 59:015, Section 4 (2)] except as provided below:

(1) Pursuant to 401 KAR 59:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.

(2) Pursuant to 401 KAR 59:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

(3) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method:

a. Mass Emission Limits:

For particulate matter and sulfur dioxide, compliance is demonstrated for the applicable emission standards (lb/mmBtu) while natural gas and fuel oil #2 are the only fuels used.

b. Opacity Limits:

Compliance is demonstrated for the applicable opacity standard while natural gas and fuel oil #2 are the only fuels used.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

40 (E-09, 10) E-Line Baker Heater (Continued)

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

The permittee shall monitor the fuel consumption of natural gas and fuel oil #2 at the E-Line Baker Heater. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the fuel consumption of natural gas and fuel oil #2 at the E-Line Baker Heater.

6. Specific Reporting Requirements:

None.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

42 (E-05, 06) E-Line Activator Furnaces #9 & #10
Feed Bin to E-Line Activator Transfer Elevators (2)
Multiple Burners (38.0 mmBtu/hr total)
Natural Gas
Total Capacity: 8.1 tons/hour Devolatized Carbon Granules
Constructed: 02/01/1975
8760 hours/year

Controls: Wet Scrubber (PM/PM_{10}, SO_2)
D.R. Technologies
Variable Venturi Spray
Minimum Pressure Drop: 6 in. H_2O
Min. Liquid Flow: 350 gpm

Direct Flame Afterburner (VOC)
Integrated into each Activator Furnace (i.e.: top burner section of furnace)
Natural Gas

APPLICABLE REGULATIONS:

401 KAR 50:012, *General Application*, applies to the emissions of volatile organic compounds from the E-Line Activators.

401 KAR 53:005, *General provisions* was applied to this emission point in order to meet NAAQS for sulfur dioxide.

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the E-Line Activators.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter and sulfur dioxide from the E-Line Activators.

1. Operating Limitations:

The total weight of carbon processed through each individual E-Line Activator shall not exceed 4.05 tons per hour and 35,478 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly carbon throughput = [Total weight of carbon processed through the E-Line Activators each month] ÷ [Total hours of operation of the E-Line Activators during the month].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

42 (E-05, 06) E-Line Activator Furnaces #9 & #10 (Continued)

2. Emission Limitations:

a. Emissions of particulate matter from each individual E-Line Activator shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of carbon processed through each individual E-Line Activator (i.e.: The hourly carbon throughput rate determined in **1.b.**, above.).

b. Emissions of particulate matter from *each* individual E-Line Activator shall not exceed 30.44 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

c. The opacity of visible emissions from each individual E-Line Activator shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

d. Emissions of SO_2 from both E-Line Activators combined shall not exceed 15.0 lbs/hr and 65.7 tons during any consecutive 12 months [401 KAR 53:005, and Permit V-00-015 (Revision 2)].

e. The afterburners shall control emissions of volatile organic compounds and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the E-Line Activators are in operation [401 KAR 50:012, Section 1 (1)]. The E-Line Activators are considered in operation any time carbon is being conveyed to the Activators.

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM / SO_2 Emission Rate = [(11.405 lbs PM/ton carbon granules processed x (1-0.85)), (7.404 lb SO_2/ton carbon granules processed x (1-0.75)), or emission factor observed during last stack test (in pounds PM / SO_2 per ton carbon)] x [The hourly carbon throughput rate determined in **1.b.**, above].

(2) The wet scrubber associated with the E-Line Activators shall control emissions of particulate matter and sulfur dioxide and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the E-Line Activators are in operation. The permittee is required to use the wet scrubber associated with the E-Line Activators in order meet the applicable emission standards for particulate matter and sulfur dioxide.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding wet scrubber use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter and sulfur dioxide from the E-Line Activators shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

42 (E-05, 06) E-Line Activator Furnaces #9 & #10 (Continued)

c. Opacity Limit:

(1) During periods of normal operation of the wet scrubber, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the E-Line Activators are in operation during any period of malfunction of the associated wet scrubber, the permittee shall determine compliance through maintenance of the records required by paragraph **5.f.** below.

d. Use of Afterburner:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of carbon processed at the E-Line Activators each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of operation of the E-Line Activators per month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the E-Line Activator scrubber once per week during operation of the E-Line Activators. The weekly inspection shall consist of the visual emissions observation as outlined in paragraph **5.f.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the temperature in the combustion chamber of the afterburners.

e. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements for the wet scrubber:

(1) The permittee shall monitor the continuous measurement of the pressure loss of waste gas stream through the wet scrubber to ensure it is at least 6 in. H_20 based on a 3-hour average, and the minimum total flow rate of liquid to the scrubber to ensure it is at least 350 gpm based on a 3-hour average. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device(s) used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location(s), installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure loss of waste gas stream through the wet scrubber and the minimum total scrubbing liquid flow rate shall be made at least once per 24-hour period during

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

42 (E-05, 06) E-Line Activator Furnaces #9 & #10 (Continued)

operation of the E-Line Activators. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs when any 3-hour period during which the average pressure loss of waste gas stream through the wet scrubber or the average flow rate of scrubbing liquid to the scrubber was below the minimums specified in paragraph **4.e.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of carbon processed at the E-Line Activators each month.

b. Each month, the permittee shall record the total weight of carbon processed at the E-Line Activators during the previous 12 months.

c. The permittee shall record the total hours of operation of the E-Line Activators each month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. The permittee shall keep records of the continuous measurement of the temperature in the combustion chamber of the afterburner.

f. During all periods of malfunction of the wet scrubber, if the E-Line Activators are in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the wet scrubber stack;

(2) Whether the visible emissions were normal for the wet scrubber stack.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the E-Line Activators wet scrubber stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

g. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the E-Line Activators in operation but the corresponding afterburner is not in operation.

h. The permittee shall record all maintenance activities performed at the wet scrubber and afterburner.

i. The following recordkeeping requirements are included to fulfill CAM for the wet scrubber:

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

42 (E-05, 06) E-Line Activator Furnaces #9 & #10 (Continued)

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);
(ii) The date(s) analyses (i.e.: Testing) were performed;
(iii) The company or entity that performed the analyses;
(iv) The analytical techniques or methods used;
(v) The results of such analyses; and
(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the average pressure loss of waste gas stream through the wet scrubber, and the average flow rate of scrubbing liquid to the scrubber), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter, sulfur dioxide, and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the E-Line Activators are in operation but the associated wet scrubber is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM for the wet scrubber:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

42 (E-05, 06) E-Line Activator Furnaces #9 & #10 (Continued)

downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

The E-Line Activator afterburners shall operate at a minimum temperature of 1400°F (3-hour average). An **excursion** from the operating range specified is any 3-hour period during which the average temperature in the afterburners was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

43 (E-07) E-Line Packaging Operations
D & E Activator to Packaging Conveyor
Capacity: 5.0 tons/hour Granular Activated Product
Constructed: 02/01/1975
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
W.W. Sly Manufacturing Company
Dynaclone No. 14
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1975

APPLICABLE REGULATIONS:

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the E-Line Packaging operations.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the E-Line Packaging operations.

1. Operating Limitations:

The total weight of activated carbon processed at the E-Line Packaging operations shall not exceed 5.0 tons per hour and 41,160 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly activated carbon throughput = [Total weight of activated carbon processed at the E-Line Packaging operations each month] ÷ [Total hours of activated carbon processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the E-Line Packaging operations shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of activated carbon processed at the E-Line Packaging operations (i.e.: The hourly activated carbon throughput rate determined in paragraph **1.b.**, above).
b. Emissions of particulate matter from the E-Line Packaging operations shall not exceed 49.39 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].
c. The opacity of visible emissions from the E-Line Packaging operations shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

43 (E-07) E-Line Packaging Operations (Continued)

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(239.990 lbs PM/per ton activated carbon x (1-0.99)), or emission factor observed during last stack test* (in pounds PM/per ton activated carbon)] x [The hourly activated carbon throughput rate determined in paragraph **1.b.**, above.]

(*Alternate emission factor may be established based on demonstration of similarity to other tested sources and/or estimated using credible engineering judgment based on conservative assumptions.)

(2) The baghouse associated with the E-Line Packaging operations shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the E-Line Packaging is in operation. The permittee is required to use the baghouse associated with the E-Line Packaging operations in order meet the particulate matter emission standard for the E-Line Packaging operations.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter from the E-Line Packaging operations shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the E-Line Packaging unit is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

b. EPA Reference Method 5, or equivalent, shall be performed within six (6) months of the date of the issuance of the final permit to determine the amount of particulate matter emissions per ton of material processed.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of activated carbon processed at the E-Line Packaging operations each month. [401 KAR 52:020, Section 10]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

43 (E-07) E-Line Packaging Operations (Continued)

b. The permittee shall monitor the total hours of activated carbon processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the E-Line Packaging baghouse once per week during E-Line Packaging operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the E-Line Packaging baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the E-Line Packaging baghouse shall be made at least once per 24-hour period during E-Line Packaging operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of activated carbon processed at the E-Line Packaging operations each month.

b. Each month, the permittee shall record the total weight of activated carbon processed at the E-Line Packaging operations during the previous 12 months.

c. The permittee shall record the total hours of E-Line Packaging operations during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the E-Line Packaging unit is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

43 (E-07) E-Line Packaging Operations (Continued)

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the E-Line Packaging operations stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. If an emission factor from other than listed above in **Compliance Demonstration Method 2.a.** is used, the permittee shall record the emission factor, its supporting assumptions, and calculations.

h. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

43 (E-07) E-Line Packaging Operations (Continued)

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the E-Line Packaging unit is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

44 (M-06) D & E Bulk Loadout System
Capacity: 1.233 tons/hour Granular Activated Product
Constructed: 1972 & 02/01/1975
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
Staclean
320-10-ADR
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1990

APPLICABLE REGULATIONS:

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the D & E Bulk Loadout System.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the D & E Bulk Loadout System.

1. Operating Limitations:

The total weight of activated carbon processed at the D & E Bulk Loadout System shall not exceed 1.23 tons per hour and 10,797 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly activated carbon throughput = [Total weight of activated carbon processed at the D & E Bulk Loadout System each month] ÷ [Total hours of activated carbon processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the D & E Bulk Loadout System shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of activated carbon processed at the D & E Bulk Loadout System (i.e.: The hourly activated carbon throughput rate determined in paragraph **1.b.**, above).
b. The opacity of visible emissions from the D & E Bulk Loadout System shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:
(1) Actual PM Emission Rate = [(382.610 lbs PM/per ton activated carbon x (1-0.99)), or emission factor observed during last stack test (in pounds

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

44 (M-06) D & E Bulk Loadout System

PM/per ton activated carbon)] x [The hourly activated carbon throughput rate determined in paragraph **1.b.**, above.]

(2) The baghouse associated with the D & E Bulk Loadout System shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the D & E Bulk Loadout System is in operation. The permittee is required to use the baghouse associated with the D & E Bulk Loadout System in order meet the particulate matter emission standard for the D & E Bulk Loadout System.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the D & E Bulk Loadout System is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of activated carbon processed at the D & E Bulk Loadout System each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of activated carbon processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the D & E Bulk Loadout System baghouse once per week during D & E Bulk Loadout System operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the D & E Bulk Loadout System baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

44 (M-06) D & E Bulk Loadout System

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the D & E Bulk Loadout System baghouse shall be made at least once per 24-hour period during D & E Bulk Loadout System operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of activated carbon processed at the D & E Bulk Loadout System each month.

b. Each month, the permittee shall record the total weight of activated carbon processed at the D & E Bulk Loadout System during the previous 12 months.

c. The permittee shall record the total hours of D & E Bulk Loadout System operations during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the D & E Bulk Loadout System is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the D & E Bulk Loadout System stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

44 (M-06) D & E Bulk Loadout System

(ii) The date(s) analyses (i.e.: Testing) were performed;
(iii) The company or entity that performed the analyses;
(iv) The analytical techniques or methods used;
(v) The results of such analyses; and
(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the D & E Bulk Loadout System is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

E. E-LINE:

44 (M-06) D & E Bulk Loadout System

implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

45 (CAS-01) Reactivation Furnace
Multiple natural gas fired burners (30.0 mmBtu/hr total capacity)
Additionally consisting of the following equipment:
Nine (9) Spent Carbon Storage Tanks
Two (2) Process Water Storage Tanks
One (1) Rotary Cooler
One (1) Screener
Three (3) Conveyors
Four (4) Product Bins
Capacity: 3.0 tons/hour Spent Carbon
Constructed: 1976
8760 hrs/yr

Controls: Reactivation Furnace
Baghouse (PM/PM_{10})
Joy Manufacturing Company
Joy Pulse-Flo
Pressure Drop: 4.0 – 12.0 in. H_2O
Constructed: 1991

Dry Scrubber (SO_2)
Niro
Rotary Atomizer
Minimum Pressure Drop: 2 in. H_2O
Liquid Flow: 40 gpm

Direct Flame Afterburner (VOC)
Integrated into Reactivator Furnace (i.e.: top burner section of furnace)
Natural Gas

Spent Carbon Storage Tanks
Carbon Adsorbers (VOC)

APPLICABLE REGULATIONS:

401 KAR 50:012, *General Application*, applies to the emissions of volatile organic compounds from the Reactivation Furnace.

401 KAR 57:002, *40 CFR Part 61 national emission standards for hazardous air pollutants*, incorporating by reference 40 CFR 61.340 to 61.358 (Subpart FF), *National emission standard for benzene waste operations*, applies to the Spent Carbon Storage Tanks portion of the Reactivation Furnace.

401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the Reactivation Furnace.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

45 (CAS-01) Reactivation Furnace (Continued)

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of hydrogen fluoride, lead, particulate matter, sulfur dioxide, and volatile organic compounds from the Reactivation Furnace.

1. Operating Limitations:

a. The total weight of spent carbon processed at the Reactivation Furnace shall not exceed 3.0 tons per hour and 26,280 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

b. The permittee shall not process any spent carbon containing radioactive material above background levels at the Reactivation Furnace [State-only Requirement, Permit O-94-020 (Revision 1)].

c. The permittee shall not process any spent carbon containing polychlorinated biphenyls (PCB) in excess of 50 mg/kg (milligrams per kilogram) at the Reactivation Furnace [State-only Requirement, Permit O-94-020 (Revision 1)].

d. The permittee shall operate and maintain a fixed roof and closed vent system that routes all organic vapors from the Spent Carbon Storage Tanks to a control device [40 CFR 61.343 (a)(1)]. Each Spent Carbon Storage Tank shall meet the requirements of 40 CFR 61.343(a)(1)(i). The closed vent system shall be operated in accordance with 40 CFR 61.349. In accordance with the provisions of 40 CFR 61.342(a), compliance with this Operating Limitation shall not be required when the permittee demonstrates that the total annual benzene quantity from facility waste is less than 10 mega grams per year (Mg/yr).

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.

b. Hourly spent carbon throughput = [Total weight of spent carbon processed at the Reactivation Furnace each month] ÷ [Total hours of operation of the Reactivation Furnace during each month].

2. Emission Limitations:

a. Emissions of particulate matter from the Reactivation Furnace shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:

For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$

Where E = rate of emissions in lb/hr, and

P = process weight rate in tons/hr of spent carbon processed at the Reactivation Furnace (i.e.: The hourly spent carbon throughput rate determined in **Compliance Demonstration Method 1.b.**, above).

However, at no time shall emissions of particulate matter from the Reactivation Furnace exceed 7.01 lb/hr [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

b. Emissions of sulfur dioxide from the Reactivation Furnace shall not exceed 21.04 lb/hr [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

45 (CAS-01) Reactivation Furnace (Continued)

c. Emissions of volatile organic compounds (VOC) from the Reactivation Furnace shall not exceed 1.80 lb/hr [State-only Requirement, Permit O-94-020 (Revision 1)].
d. Emissions of nitrogen oxides from the Reactivation Furnace shall not exceed 26.90 lb/hr [*Synthetic Minor Limit*, Permit C-80-126 & O-94-020 (Revision 1)].
e. Emissions of hydrogen fluoride from the Reactivation Furnace shall not exceed 0.50 lb/hr [*Synthetic Minor Limit*, Permit C-80-126 & O-94-020 (Revision 1)].
f. Emissions of lead from the Reactivation Furnace shall not exceed 2.58 lb/hr [State-only Requirement, Permit O-94-020 (Revision 1)].
g. The opacity of visible emissions from the Reactivation Furnace shall not equal or exceed 10 percent [State-only Requirement, Permit O-94-020 (Revision 1)].
h. There shall be no visible emissions from the transfer point baghouse to enclosed containers subsequently transferred to a landfill [State-only Requirement, Permit O-94-020 (Revision 1)].
i. The afterburner shall control emissions of volatile organic compounds and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the Reactivation Furnace is in operation [401 KAR 50:012, Section 1 (1)].
j. The closed vent system designed for control of organic emissions from the Spent Carbon Storage Tanks shall meet the requirements of 40 CFR 61.349 (a)(1)(i)-(iv). *
k. The carbon adsorption system shall recover or control the organic emissions vented to it with an efficiency of 95 weight percent or greater, or shall recover or control the benzene emission vented to it with an efficiency of 98 weight percent or greater. * [40 CFR 61.349(2)(ii)]

*In accordance with the provisions of 40 CFR 61.342(a), compliance with **Emission Limitations 2.j.** and **2.k.** shall not be required when the permittee demonstrates that the total annual benzene quantity from facility waste is less than 10 mega grams per year (Mg/yr).

Compliance Demonstration Method:

a. Mass Emission Standard:
   (1) Actual PM / VOC / NOx / HF / Pb Emission Rate = [(233.600 lbs PM per ton spent carbon x (1-0.99)), (26.350 lbs VOC per ton spent carbon x (1-0.98)), (7.986 lbs NOx per ton spent carbon), (16.667 lbs HF per ton spent carbon x (1-.99)), (85.999 lbs Pb per ton spent carbon x (1-0.99)), or emission factor observed during last stack test (in pounds pollutant per ton spent carbon)] x [The hourly spent carbon throughput rate determined in **1.b.**, above.]
   (2) The actual SO_2 emission rate will be determined by data obtained from the continuous emission monitor (CEM). See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below.
   (3) The dry scrubber associated with the Reactivation Furnace shall control emissions of sulfur dioxide and be operated properly in accordance with

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

45 (CAS-01) Reactivation Furnace (Continued)

manufacturer's specifications and/or standard operating procedures at all times the Reactivation Furnace is in operation. The permittee is required to use the dry scrubber associated with the Reactivation Furnace in order meet the sulfur dioxide emission standard for the Reactivation Furnace.

(4) The baghouse associated with the Reactivation Furnace shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the Reactivation Furnace is in operation. The permittee is required to use the baghouse associated with the Reactivation Furnace in order meet the particulate matter emission standard for the Reactivation Furnace.

(5) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding dry scrubber and baghouse use.

b. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the Reactivation Furnace is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

c. Performance and use of the afterburner, and carbon adsorber:
See the **Testing** and **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

b. The permittee shall demonstrate that the carbon adsorption system achieves the required control efficiency through one of the following methods: [40 CFR 61.349(c)]

(1) Engineering calculations in accordance with the requirements specified in 40 CFR 61.356(f); or

(2) Performance tests conducted using the test methods and procedures that meet the requirements specified in 40 CFR 61.355.

c. Whenever necessary, the permittee shall determine the total annual benzene quantity from facility waste in accordance with 40 CFR 61.355 (a).

d. EPA Reference Method 5 and 6, or equivalent, shall be performed within six (6) months of the date of the issuance of the final permit to determine the amount of particulate matter and sulfur dioxide emissions per ton of material processed.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

45 (CAS-01) Reactivation Furnace (Continued)

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of spent carbon processed at the Reactivation Furnace each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of spent carbon processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the Reactivation Furnace baghouse once per week during Reactivation Furnace operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The permittee shall visually inspect (and repair as necessary) the Spent Carbon Storage Tanks and the closed vent system on a quarterly basis in accordance with 40 CFR 61.343(c) and 61.349(f) and (g).

e. For the carbon adsorbers, comply with either of the following:

(1) The permittee shall obtain samples of the carbon in the adsorption units on a quarterly basis and shall analyze the samples for determination of the Apparent Density. Replacement of the carbon shall be required when: [40 CFR 61.354 (d)]

(i) the measured Apparent Density exceeds 0.7, or

(ii) on an annual basis, whichever occurs first.

(2) Replace the carbon in the adsorption units on a quarterly basis. [401 KAR 52:020, Section 10; Permit V-06-020; and source comments]

f. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the following pollutant specific indicators: [40 CFR 64.6(c)(1)(i), and 40 CFR 64.4(d)(1) for use of CEM on SO_2]

(i) For particulate matter, the continuous measurement of the pressure drop of the gas stream through the Reactivation Furnace baghouse to ensure it is within the following range: 4.0 – 12.0 in. H_2O.

(ii) For particulate matter, the continuous measurement of the outlet temperature of the gas stream through the Reactivation Furnace baghouse to ensure it is above 200°F (3-hour average).

(iii) For sulfur dioxide, the continuous measurement of the concentration of sulfur dioxide in the outlet gas stream from the Reactivation Furnace dry scrubber using a CEM to ensure it is less than the corresponding emission limitation of 21.04 lb/hr.

(iv) For volatile organic compounds, the continuous measurement of the temperature in the combustion chamber of the Reactivation Furnace afterburner to ensure it is greater than 1625°F (3-hour average).

(v) For hydrogen fluoride and lead, the continuous measurement of the outlet temperature of the gas stream through the Reactivation Furnace dry scrubber to ensure it is above 200°F (3-hour average).

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

45 (CAS-01) Reactivation Furnace (Continued)

(2) The monitoring devices used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device locations, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the indicators monitored in paragraphs **4.f.(1)(i)**, **(ii)**, **(iv)** and **(v)**, above, shall be made at least once per 24-hour period during Reactivation Furnace operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) The following special criteria are included for use of the CEM associated with monitoring sulfur dioxide emissions: [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(d)(2)(vi)]

(i) The permittee must keep the necessary parts for routine repairs of the CEM readily available.

(ii) The permittee must develop and implement a written startup, shutdown, and malfunction plan for the CEM based on the guidelines provided in 40 CFR 63.6(e)(3).

(iii) Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, the CEM shall be in continuous operation, and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(iv) The permittee must check the zero (low-level) and high-level calibration drifts at least once daily. The zero (low-level) and high-level calibration drifts must be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds two times the limits of the applicable performance specification(s) specified by the CEM manufacturer. The system shall allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified whenever specified.

(v) The CEM is out of control if:

(A) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specified by the CEM manufacturer; or

(B) The CEM fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit.

(vi) When the CEM is out of control, as defined above, the permittee shall take the necessary corrective action and shall repeat all necessary tests which indicate that the system is out of control. The permittee shall take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour the permittee

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

45 (CAS-01) Reactivation Furnace (Continued)

conducts a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During the period the CEM is out of control, recorded data shall not be used in data averages and calculations.

(vii) The permittee shall develop and implement a CEM quality control program. Where relevant (i.e.: program of corrective action for a malfunctioning CEM) these written procedures may be incorporated as part of the startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. The quality control program shall include, at a minimum, a written protocol that describes procedures for each of the following operations:

(A) Initial and any subsequent calibration of the CEM;

(B) Determination and adjustment of the calibration drift of the CEM;

(C) Preventive maintenance of the CEM, including spare parts inventory;

(D) Data recording, calculations, and reporting;

(E) Accuracy audit procedures, including sampling and analysis methods; and

(F) Program of corrective action for a malfunctioning CEM.

(viii) CEM data shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEM data may be used.

(ix) The data may be recorded in reduced or nonreduced form.

(x) All emission data shall be converted into units of the relevant standard for reporting purposes.

(xi) Monitoring data recorded during periods of unavoidable CEM breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level adjustments must not be included in any data average computed for compliance determinations.

(6) An excursion occurs anytime the indicators monitored in paragraph **4.f.(1)**, above, are outside of the prescribed range, or above or below the maximum or minimum value, as appropriate. [40 CFR 64.6(c)(2)]

(7) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

45 (CAS-01) Reactivation Furnace (Continued)

(8) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of spent carbon processed at the Reactivation Furnace each month.

b. Each month, the permittee shall record the total weight of spent carbon processed at the Reactivation Furnace during the previous 12 months.

c. The permittee shall record the total hours of Reactivation Furnace operations during the month.

d. The permittee shall record the findings of the weekly visual inspection of the Reactivation Furnace baghouse and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the Reactivation Furnace unit is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the Reactivation Furnace stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse, dry scrubber, afterburner and carbon adsorber.

g. The permittee shall maintain engineering design documentation for the carbon adsorption system that is installed on the Spent Carbon Storage Tanks. The documentation shall be retained for the life of the carbon adsorption system. [40 CFR 61.356(d)]

h. The permittee shall maintain records for the carbon adsorption system in accordance with 40 CFR 61.356(f)(1) and 61.356(f)(2)(i)(G). [40 CFR 61.356(f)]

i. The permittee shall maintain a record for each Spent Carbon Storage Tank visual inspection required by 40 CFR 61.343(c). [40 CFR 61.356(g)]

j. For the carbon adsorption system, the permittee shall maintain a record of each test of no detectable emissions required by 40 CFR 61.349(g). The record shall contain the information required by 40 CFR 61.356(h).

k. For the carbon adsorption system, the permittee shall maintain the records required by 40 CFR 61.356(j).

l. For the carbon adsorption system, the permittee shall maintain records of the quarterly Apparent Density analytical results and the associated carbon replacement events.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

45 (CAS-01) Reactivation Furnace (Continued)

m. The permittee shall maintain records of the following information for each approved customer application type of spent carbon that will be processed at the Reactivation Furnace:
   (1) A complete organic analysis of the spent carbon used at any RCRA site.
   (2) A certification from all sources of spent carbon stating that no dioxin adsorption has occurred on the spent carbon and no PCB adsorption in excess of 50 mg/kg has occurred on the spent carbon.
   (3) If the spent carbon has a chloride content of greater than 4.0% by weight, then the permittee shall submit a written notice to the division, with a copy to the division's Ashland Regional Office, of the intent to process such carbon at least 5 days prior to processing. The notice shall contain the following information:
      (i) The source of the spent carbon;
      (ii) The chlorine and sulfur content;
      (iii) The maximum processing rate of the carbon, and calculations demonstrating that emissions of HCl do not exceed 2.55 lbs/hr.

n. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):
   (1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]
      (iv) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);
      (v) The date(s) analyses (i.e.: Testing) were performed;
      (vi) The company or entity that performed the analyses;
      (vii) The analytical techniques or methods used;
      (viii) The results of such analyses; and
      (ix) The operating conditions as existing at the time of sampling or measurement.
   (2) The permittee shall maintain records of monitoring data (i.e.: daily recordings of the continuous measurements required by **Specific Monitoring Requirement 4.f.(4)**, and the hourly average recordings of the continuous measurements of the CEM required by **Specific Monitoring Requirement 4.f.(5)(viii)**), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]
   (3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

45 (CAS-01) Reactivation Furnace (Continued)

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance **Emission Limitation 2.a.** and **2.c. – h**., above, within thirty days of when the exceedance is determined.

(2) A written report of all exceedances of **Emission Limitation 2.b.**, above, as measured by the SO_2 continuous emission monitor (CEM).

(3) The occurrence, duration, cause, and any corrective action taken for each incident when the Reactivation Furnace operations are in progress but the associated dry scrubber, baghouse, afterburner, and carbon adsorption system are not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime and out of control incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

a. The permittee shall operate and maintain furnace feed shutdown systems that are activated if: [Permit O-94-020 (Revision 1)]

(1) The dry scrubber atomizer wheel stops.

(2) The spray dryer outlet temperature exceeds the maximum continuous service temperature rating of the dust collector bags.

(3) The furnace afterburner system stack temperature fall below 1600°F (3-hour average).

b. The permittee shall operate and maintain process alarms that are activated if: [Permit O-94-020 (Revision 1)]

(1) The furnace afterburner system stack temperature fall below 1625°F (3-hour average).

(2) The baghouse outlet temperature falls below 200°F (3-hour average).

(3) The dry scrubber outlet temperature falls below 200°F (3-hour average).

(4) The dry scrubber and baghouse catch disposal silo fills to within 12 inches of its top.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

48 (CAS-06) Waste Disposal Silo
Capacity: 3.0 tons/hour Fly ash / Baghouse Powder
Constructed: 1981
8760 hrs/yr

Controls: Bin Vent Dust Collector (PM/PM_{10})
Flex Kleen
Model 84-BVBC-25 IIG
Maximum Pressure Drop: 20.0 in. H_2O
Constructed: 1981

APPLICABLE REGULATIONS:
401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the Waste Disposal Silo.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the Waste Disposal Silo.

1. Operating Limitations:
The total weight of waste processed at the Waste Disposal Silo shall not exceed 3.0 tons per hour and 26,208 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:
a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly waste throughput = [Total weight of waste processed at the Waste Disposal Silo each month] ÷ [Total hours of waste processing during the month].

2. Emission Limitations:
a. Emissions of particulate matter from the Waste Disposal Silo shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of waste processed at the Waste Disposal Silo (i.e.: The hourly waste throughput rate determined in **1.b.**, above).
b. The opacity of visible emissions from the Waste Disposal Silo shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

Compliance Demonstration Method:
a. Mass Emission Standard:
(1) Actual PM Emission Rate = [(236.467 lbs PM/ton waste processed x (1-0.99)), or emission factor observed during last stack test* (in pounds PM/per ton waste)] x [The hourly waste throughput rate determined in **1.b.**, above].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

48 (CAS-06) Waste Disposal Silo (Continued)

(*Alternate emission factor may be established based on demonstration of similarity to other tested sources and/or estimated using credible engineering judgment based on conservative assumptions.)

(2) The bin vent dust collector associated with the Waste Disposal Silo shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the Waste Disposal Silo is loaded or unloaded. The permittee is required to use the bin vent dust collector associated with the Waste Disposal Silo in order meet the particulate matter emission standard for the Waste Disposal Silo.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding bin vent dust collector use.

b. Opacity Limit:

(1) During periods of normal operation of the bin vent dust collector, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the Waste Disposal Silo is in operation during any period of malfunction of its associated bin vent dust collector, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of waste processed at the Waste Disposal Silo each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of waste processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the Waste Disposal Silo bin vent dust collector once per week during operation of the Waste Disposal Silo. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the Waste Disposal Silo bin vent dust collector to ensure it is below 20.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

48 (CAS-06) Waste Disposal Silo (Continued) (Continued)

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the Waste Disposal Silo bin vent dust collector shall be made at least once per 24-hour period during operation of the Waste Disposal Silo. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is above the maximum indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of waste processed at the Waste Disposal Silo each month.

b. Each month, the permittee shall record the total weight of waste processed at the Waste Disposal Silo during the previous 12 months.

c. The permittee shall record the total hours of waste processing during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the bin vent dust collector, if the Waste Disposal Silo is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the bin vent dust collector stack;

(2) Whether the visible emissions were normal for the bin vent dust collector.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the Waste Disposal Silo stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the bin vent dust collector.

g. If an emission factor from other than listed above in **Compliance Demonstration Method 2.a.** is used, the permittee shall record the emission factor, its supporting assumptions, and calculations.

h. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

48 (CAS-06) Waste Disposal Silo (Continued) (Continued)

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);
(ii) The date(s) analyses (i.e.: Testing) were performed;
(iii) The company or entity that performed the analyses;
(iv) The analytical techniques or methods used;
(v) The results of such analyses; and
(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the bin vent dust collector), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:
(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.
(2) The occurrence, duration, cause, and any corrective action taken for each incident when the Waste Disposal Silo is in operation but the bin vent dust collector is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:
(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

48 (CAS-06) Waste Disposal Silo (Continued) (Continued)

shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

49 (CAS-07) Soda Ash Storage Silo
Capacity: 3.0 tons/hour Soda Ash
Constructed: 1981
8760 hrs/yr

Controls: Bin Vent Dust Collector (PM/PM_{10})
Flex Kleen
Model 58-BVBS-9 IIG
Maximum Pressure Drop: 20.0 in. H_2O
Constructed: 1981

APPLICABLE REGULATIONS:
401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the Soda Ash Storage Silo.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the Soda Ash Storage Silo.

1. Operating Limitations:
The total weight of soda ash processed at the Soda Ash Storage Silo shall not exceed 3.0 tons per hour and 26,208 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:
a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly soda ash throughput = [Total weight of soda ash processed at the Soda Ash Storage Silo each month] ÷ [Total hours of soda ash processing during the month].

2. Emission Limitations:
a. Emissions of particulate matter from the Soda Ash Storage Silo shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of soda ash processed at the Soda Ash Storage Silo (i.e.: The hourly soda ash throughput rate determined in **1.b.**, above).
b. The opacity of visible emissions from the Soda Ash Storage Silo shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

Compliance Demonstration Method:
a. Mass Emission Standard:
(1) Actual PM Emission Rate = [(236.467 lbs PM/ton soda ash processed x (1-0.99)), or emission factor observed during last stack test* (in pounds PM/per ton soda ash)] x [The hourly soda ash throughput rate determined in **1.b.**, above].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

49 (CAS-07) Soda Ash Storage Silo (Continued)

(*Alternate emission factor may be established based on demonstration of similarity to other tested sources and/or estimated using credible engineering judgment based on conservative assumptions.)

(2) The bin vent dust collector associated with the Soda Ash Storage Silo shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the Soda Ash Storage Silo is loaded or unloaded. The permittee is required to use the bin vent dust collector associated with the Soda Ash Storage Silo in order meet the particulate matter emission standard for the Soda Ash Storage Silo.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding bin vent dust collector use.

b. Opacity Limit:

(1) During periods of normal operation of the bin vent dust collector, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the Soda Ash Storage Silo is in operation during any period of malfunction of its associated bin vent dust collector, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of soda ash processed at the Soda Ash Storage Silo each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of soda ash processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the Soda Ash Storage Silo bin vent dust collector once per week during operation of the Soda Ash Storage Silo. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the Soda Ash Storage Silo bin vent dust collector to ensure it is below 20.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

49 (CAS-07) Soda Ash Storage Silo (Continued)

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the Soda Ash Storage Silo bin vent dust collector shall be made at least once per 24-hour period during operation of the Soda Ash Storage Silo. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is above the maximum indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of soda ash processed at the Soda Ash Storage Silo each month.

b. Each month, the permittee shall record the total weight of soda ash processed at the Soda Ash Storage Silo during the previous 12 months.

c. The permittee shall record the total hours of soda ash processing during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the bin vent dust collector, if the Soda Ash Storage Silo is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the bin vent dust collector stack;

(2) Whether the visible emissions were normal for the bin vent dust collector.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the Soda Ash Storage Silo stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the bin vent dust collector.

g. If an emission factor from other than listed above in **Compliance Demonstration Method 2.a.** is used, the permittee shall record the emission factor, its supporting assumptions, and calculations.

h. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

49 (CAS-07) Soda Ash Storage Silo (Continued)

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]
   (i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);
   (ii) The date(s) analyses (i.e.: Testing) were performed;
   (iii) The company or entity that performed the analyses;
   (iv) The analytical techniques or methods used;
   (v) The results of such analyses; and
   (vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the bin vent dust collector), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:
   (1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.
   (2) The occurrence, duration, cause, and any corrective action taken for each incident when the Soda Ash Storage Silo is in operation but the bin vent dust collector is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:
   (1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
   (2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

49 (CAS-07) Soda Ash Storage Silo (Continued)

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:
See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

50 (A-15) Pulverizer Collection System
Pulverizer Elevator
Capacity: 3.0 tons/hour Fines
Constructed: 1972
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
W.W. Sly Manufacturing Company
Dynaclone No. 12, Type A
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1983

APPLICABLE REGULATIONS:

401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the Pulverizer Collection System.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the Pulverizer Collection System.

1. Operating Limitations:

The total weight of fines processed at the Pulverizer Collection System shall not exceed 3.0 tons per hour and 25,200 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.

b. Hourly fines throughput = [Total weight of fines processed at the Pulverizer Collection System each month] ÷ [Total hours of fines processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the Pulverizer Collection System shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of fines processed at the Pulverizer Collection System (i.e.: The hourly fines throughput rate determined in paragraph **1.b.**, above).

b. Emissions of particulate matter from the Pulverizer Collection System shall not exceed 35.95 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].

c. The opacity of visible emissions from the Pulverizer Collection System shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

50 (A-15) Pulverizer Collection System (Continued)

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(285.333 lbs PM/per ton fines x (1-0.99)), or emission factor observed during last stack test (in pounds PM/per ton fines)] x [The hourly fines throughput rate determined in paragraph **1.b.**, above.]

(2) The baghouse associated with the Pulverizer Collection System shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the Pulverizer Collection System is in operation. The permittee is required to use the baghouse associated with the Pulverizer Collection System in order meet the particulate matter emission standard for the Pulverizer Collection System.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter from the Pulverizer Collection System shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the Pulverizer Collection System is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of fines processed at the Pulverizer Collection System each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of fines processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the Pulverizer Collection System baghouse once per week during Pulverizer Collection System operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

50 (A-15) Pulverizer Collection System (Continued)

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:
   (1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the Pulverizer Collection System baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]
   (2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]
   (3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]
   (4) A recording of the continuous measurement of the pressure drop of the gas stream through the Pulverizer Collection System baghouse shall be made at least once per 24-hour period during Pulverizer Collection System operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]
   (5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]
   (6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.
   (7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of fines processed at the Pulverizer Collection System each month.
b. Each month, the permittee shall record the total weight of fines processed at the Pulverizer Collection System during the previous 12 months.
c. The permittee shall record the total hours of Pulverizer Collection System operations during the month.
d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.
e. During all periods of malfunction of the baghouse, if the Pulverizer Collection System is in operation, a daily (calendar day) log of the following information shall be kept:
   (1) Whether any air emissions were visible from the baghouse stack;
   (2) Whether the visible emissions were normal for the baghouse.
   (3) The cause of any abnormal emissions and any corrective action taken.
   (4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the Pulverizer Collection System stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

50 (A-15) Pulverizer Collection System (Continued)

f. All maintenance activities performed at the baghouse.

g. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the Pulverizer Collection System is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

50 (A-15) Pulverizer Collection System (Continued)

downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

51 (C-09) A, B, C & Acid Wash Fines Packaging System
Capacity: 1.0 ton/hour Fines
Constructed: 1983
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
Koppers Co.
Model T9-09-11
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1983

APPLICABLE REGULATIONS:
401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the A, B, C & Acid Wash Fines Packaging System.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the A, B, C & Acid Wash Fines Packaging System.

1. Operating Limitations:

The total weight of fines processed at the A, B, C & Acid Wash Fines Packaging System shall not exceed 1.0 tons per hour and 8,760 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly fines throughput = [Total weight of fines processed at the A, B, C & Acid Wash Fines Packaging System each month] ÷ [Total hours of fines processing during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the A, B, C & Acid Wash Fines Packaging System shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of fines processed at the A, B, C & Acid Wash Fines Packaging System (i.e.: The hourly fines throughput rate determined in **1.b.**, above).
b. The opacity of visible emissions from the A, B, C & Acid Wash Fines Packaging System shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:
(1) Actual PM Emission Rate = [(359.0 lbs PM/ton fines processed x (1-0.99)), or emission factor observed during last stack test* (in pounds

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

51 (C-09) A, B, C & Acid Wash Fines Packaging System (Continued)

PM/per ton fines)] x [The hourly fines throughput rate determined in **1.b.**, above].

(*Alternate emission factor may be established based on demonstration of similarity to other tested sources and/or estimated using credible engineering judgment based on conservative assumptions.)

(2) The baghouse associated with the A, B, C & Acid Wash Fines Packaging System shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the A, B, C & Acid Wash Fines Packaging System is in operation. The permittee is required to use the baghouse associated with the A, B, C & Acid Wash Fines Packaging System in order meet the particulate matter emission standard for the A, B, C & Acid Wash Fines Packaging System.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the A, B, C & Acid Wash Fines Packaging System is in operation during any period of malfunction of its associated bin vent dust collector, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of fines processed at the A, B, C & Acid Wash Fines Packaging System each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of fines processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the A, B, C & Acid Wash Fines Packaging System bin vent dust collector once per week during operation of the A, B, C & Acid Wash Fines Packaging System. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

51 (C-09) A, B, C & Acid Wash Fines Packaging System (Continued)

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the A, B, C & Acid Wash Fines Packaging System baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the A, B, C & Acid Wash Fines Packaging System baghouse shall be made at least once per 24-hour period during operation of the A, B, C & Acid Wash Fines Packaging System. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is above the maximum indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. <u>Specific Recordkeeping Requirements</u>:

a. The permittee shall record the total weight of fines processed at the A, B, C & Acid Wash Fines Packaging System each month.

b. Each month, the permittee shall record the total weight of fines processed at the A, B, C & Acid Wash Fines Packaging System during the previous 12 months.

c. The permittee shall record the total hours of soda ash processing during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the A, B, C & Acid Wash Fines Packaging System is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the bin vent dust collector stack;

(2) Whether the visible emissions were normal for the bin vent dust collector.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the A, B, C & Acid Wash Fines Packaging System stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

51 (C-09) A, B, C & Acid Wash Fines Packaging System (Continued)

f. All maintenance activities performed at the baghouse.

g. If an emission factor from other than listed above in **Compliance Demonstration Method 2.a.** is used, the permittee shall record the emission factor, its supporting assumptions, and calculations.

h. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the A, B, C & Acid Wash Fines Packaging System is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

51 (C-09) A, B, C & Acid Wash Fines Packaging System (Continued)

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

52 (F-01) Activated Carbon Fine Mesh Production
Capacity: 2.0 tons/hour Activated Carbon Fines
Constructed: 1990
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
Flex Kleen
120 WMT 180, 12
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1990

APPLICABLE REGULATIONS:
401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the Activated Carbon Fine Mesh Production unit.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the Activated Carbon Fine Mesh Production unit.

1. Operating Limitations:

The total weight of activated carbon fines produced at the Activated Carbon Fine Mesh Production unit shall not exceed 2.0 tons per hour and 17,520 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly activated carbon fines production rate = [Total weight of activated carbon fines produced at the Activated Carbon Fine Mesh Production unit each month] ÷ [Total hours of operation of the Activated Carbon Fine Mesh Production unit during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the Activated Carbon Fine Mesh Production unit shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of activated carbon fines produced (i.e.: The hourly activated carbon fines production rate determined in **1.b.**, above).
b. Emissions of particulate matter from the Activated Carbon Fine Mesh Production unit shall not exceed 12.42 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].
c. The opacity of visible emissions from the Activated Carbon Fine Mesh Production unit shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

52 (F-01) Activated Carbon Fine Mesh Production (Continued)

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(141.781 lbs PM/per ton activated carbon fines produced x (1-0.99)), or emission factor observed during last stack test (in pounds PM/per ton activated carbon fines produced)] x [The hourly activated carbon fines production rate determined in paragraph **1.b.**, above.]

(2) The baghouse associated with the Activated Carbon Fine Mesh Production unit shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the Activated Carbon Fine Mesh Production unit is in operation. The permittee is required to use the baghouse associated with the Activated Carbon Fine Mesh Production unit in order meet the particulate matter emission standard for the Activated Carbon Fine Mesh Production unit.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter from the Activated Carbon Fine Mesh Production unit shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the Activated Carbon Fine Mesh Production unit is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of activated carbon fines produced at the Activated Carbon Fine Mesh Production unit each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of activated carbon fines produced during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the Activated Carbon Fine Mesh Production unit baghouse once per week during Activated Carbon Fine Mesh Production unit operations. The weekly inspection shall consist of a visual inspection of the

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

52 (F-01) Activated Carbon Fine Mesh Production (Continued)

physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:

(1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the Activated Carbon Fine Mesh Production unit baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]

(2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]

(3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]

(4) A recording of the continuous measurement of the pressure drop of the gas stream through the Activated Carbon Fine Mesh Production unit baghouse shall be made at least once per 24-hour period during Activated Carbon Fine Mesh Production unit operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]

(5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]

(6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.

(7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. <u>Specific Recordkeeping Requirements</u>:

a. The permittee shall record the total weight of activated carbon fines produced at the Activated Carbon Fine Mesh Production unit each month.

b. Each month, the permittee shall record the total weight of activated carbon fines produced at the Activated Carbon Fine Mesh Production unit during the previous 12 months.

c. The permittee shall record the total hours of Activated Carbon Fine Mesh Production unit operations during the month.

d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

e. During all periods of malfunction of the baghouse, if the Activated Carbon Fine Mesh Production unit is in operation, a daily (calendar day) log of the following information shall be kept:

(1) Whether any air emissions were visible from the baghouse stack;

(2) Whether the visible emissions were normal for the baghouse.

(3) The cause of any abnormal emissions and any corrective action taken.

(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the Activated

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

52 (F-01) Activated Carbon Fine Mesh Production (Continued)

Carbon Fine Mesh Production unit stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the Activated Carbon Fine Mesh Production unit is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

52 (F-01) Activated Carbon Fine Mesh Production (Continued)

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

53 (CAS-09) Reactivation Process for Custom Product
Capacity: 2.5 tons/hour Custom Product
Constructed: 1990
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
Flex Kleen
120 WMT 180, 12
Pressure Drop: 1.0 – 5.0 in. H_2O
Constructed: 1990

APPLICABLE REGULATIONS:
401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the Reactivation Process for Custom Product unit.

40 CFR Part 64, *Compliance Assurance Monitoring*, applies to the emissions of particulate matter from the Reactivation Process for Custom Product unit.

1. Operating Limitations:

The total weight of custom product reactivated at the Reactivation Process for Custom Product unit shall not exceed 2.5 tons per hour and 21,840 tons during any consecutive 12 months [State-only Requirement, Permit O-94-020 (Revision 1)].

Compliance Demonstration Method:

a. See the **Specific Monitoring** and **Recordkeeping Requirements**, below.
b. Hourly custom product reactivation rate = [Total weight of custom product reactivated at the Reactivation Process for Custom Product unit each month] ÷ [Total hours of operation of the Reactivation Process for Custom Product unit during the month].

2. Emission Limitations:

a. Emissions of particulate matter from the Reactivation Process for Custom Product unit shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of custom product reactivated (i.e.: The hourly custom product reactivation rate determined in **1.b.**, above).
b. Emissions of particulate matter from the Reactivation Process for Custom Product unit shall not exceed 2.48 tons during any consecutive 12 months [*Synthetic Minor Limit*, Permit O-94-020 (Revision 1)].
c. The opacity of visible emissions from the Reactivation Process for Custom Product unit shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

53 (CAS-09) Reactivation Process for Custom Product (Continued)

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(22.711 lbs PM/per ton custom product x (1-0.99)), or emission factor observed during last stack test (in pounds PM/per ton custom product)] x [The hourly custom product reactivation rate determined in paragraph **1.b.**, above.]

(2) The baghouse associated with the Reactivation Process for Custom Product unit shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the Reactivation Process for Custom Product unit is in operation. The permittee is required to use the baghouse associated with the Reactivation Process for Custom Product unit in order meet the particulate matter emission standard for the Reactivation Process for Custom Product unit.

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Annual Mass Emission Standard:

The total emissions of particulate matter from the Reactivation Process for Custom Product unit shall be calculated each month for the previous twelve (12) months and compared to the annual limit.

c. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the Reactivation Process for Custom Product unit is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.e.** below.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of custom product reactivated at the Reactivation Process for Custom Product unit each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of operation of the Reactivation Process for Custom Product unit during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the Reactivation Process for Custom Product unit baghouse once per week during Reactivation Process for Custom Product unit operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

53 (CAS-09) Reactivation Process for Custom Product (Continued)

emissions observation as outlined in paragraph **5.e.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The following procedures are included to fulfill Compliance Assurance Monitoring (CAM) requirements:
   (1) The permittee shall monitor the continuous measurement of the pressure drop of the gas stream through the Reactivation Process for Custom Product unit baghouse to ensure it is within the following range: 1.0 – 5.0 in. H_2O. [40 CFR 64.6(c)(1)(i)]
   (2) The monitoring device used shall be based upon manufacturer's specifications. [40 CFR 64.6(c)(1)(ii)]
   (3) The monitoring device location, installation specifications, and calibrations shall be in accordance with manufacturer's specifications. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(1) and (3)]
   (4) A recording of the continuous measurement of the pressure drop of the gas stream through the Reactivation Process for Custom Product unit baghouse shall be made at least once per 24-hour period during Reactivation Process for Custom Product unit operations. [40 CFR 64.6(c)(1)(iii), and 40 CFR 64.3(b)(4)]
   (5) An excursion occurs anytime the pressure drop is outside of the range indicated in paragraph **4.d.(1)**, above. [40 CFR 64.6(c)(2)]
   (6) CAM recordkeeping and reporting requirements are included in the **Specific Recordkeeping** and **Reporting** requirements, below.
   (7) Other general obligations required by CAM are included in **Section E – Source Control Equipment Requirements**.

5. <u>Specific Recordkeeping Requirements</u>:

a. The permittee shall record the total weight of custom product reactivated at the Reactivation Process for Custom Product unit each month.
b. Each month, the permittee shall record the total weight of custom product reactivated at the Reactivation Process for Custom Product unit during the previous 12 months.
c. The permittee shall record the total hours of Reactivation Process for Custom Product unit operations during the month.
d. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.
e. During all periods of malfunction of the baghouse, if the Reactivation Process for Custom Product unit is in operation, a daily (calendar day) log of the following information shall be kept:
   (1) Whether any air emissions were visible from the baghouse stack;
   (2) Whether the visible emissions were normal for the baghouse.
   (3) The cause of any abnormal emissions and any corrective action taken.
   (4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the Reactivation Process for Custom Product unit stack. The opacity observed shall be

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

53 (CAS-09) Reactivation Process for Custom Product (Continued)

recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

f. All maintenance activities performed at the baghouse.

g. The following recordkeeping requirements are included to fulfill Compliance Assurance Monitoring (CAM):

(1) The permittee shall comply with the recordkeeping requirements specified below: [40 CFR 64.9(b)(1)]

(i) The date, place as defined in the permit, and time of sampling or measurements (i.e.: Testing);

(ii) The date(s) analyses (i.e.: Testing) were performed;

(iii) The company or entity that performed the analyses;

(iv) The analytical techniques or methods used;

(v) The results of such analyses; and

(vi) The operating conditions as existing at the time of sampling or measurement.

(2) The permittee shall maintain records of monitoring data (i.e.: the daily reading of the pressure loss of the gas stream through the baghouse), monitor performance data (i.e.: calibrations), corrective actions taken, any written quality improvement plan (QIP) required pursuant to **Section E – Source Control Equipment Requirement 2.f.** and any activities undertaken to implement a QIP, and other supporting information required to be maintained by CAM (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

(3) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(2)]

6. Specific Reporting Requirements:

a. The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

(1) Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.

(2) The occurrence, duration, cause, and any corrective action taken for each incident when the Reactivation Process for Custom Product unit is in operation but the baghouse is not in operation.

b. The following summary reporting requirements, which shall be reported in accordance with section **F.5.** and **F.6.** of this permit, are included to fulfill CAM:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

53 (CAS-09) Reactivation Process for Custom Product (Continued)

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in **Section E – Source Control Equipment Requirement 2.f. – i.**. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

72 (--) D & E Pneumatic Fines Conveyor System
Capacity: 1.2 tons/hour Carbon Fines
Constructed: anticipated for 2006
8760 hrs/yr

Controls: Baghouse (PM/PM_{10})
Flex Kleen
120 WMT 1/80, 12
Pressure Drop: 4.0 – 12.0 in. H_2O
Constructed: anticipated for 2006

APPLICABLE REGULATIONS:
401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the D & E Pneumatic Fines Conveyor System.

1. Operating Limitations:
None.

2. Emission Limitations:

a. Emissions of particulate matter from the D & E Pneumatic Fines Conveyor System shall not exceed the allowable rate limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$
Where E = rate of emissions in lb/hr, and
P = process weight rate in tons/hr of carbon fines processed at the D & E Pneumatic Fines Conveyor System (i.e.: [Amount of carbon fines processed at the D & E Pneumatic Fines Conveyor System per month] ÷ [Total hours of carbon fines processing during the month]).

b. The opacity of visible emissions from the D & E Pneumatic Fines Conveyor System shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

Compliance Demonstration Method:

a. Mass Emission Standard:

(1) Actual PM Emission Rate = [(10.714 lbs PM/per ton carbon fines processed x (1-0.99)), or emission factor observed during last stack test or estimated using credible engineering judgment based on conservative assumptions (in pounds PM/per ton carbon fines processed)] x [The hourly carbon fines processing rate determined in paragraph **2.a.**, above.]

(2) The baghouse associated with the D & E Pneumatic Fines Conveyor System shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the D & E Pneumatic Fines Conveyor System is in operation. The permittee is required to use the baghouse associated with the D & E Pneumatic Fines Conveyor System operations in order meet the particulate matter emission standard for the D & E Pneumatic Fines Conveyor System.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

72 (--) D & E Pneumatic Fines Conveyor System (Continued)

(3) See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, below, regarding baghouse use.

b. Opacity Limit:

(1) During periods of normal operation of the baghouse, compliance is demonstrated by the weekly visual inspection required by paragraph **4.c.** below.

(2) If the D & E Pneumatic Fines Conveyor System is in operation during any period of malfunction of its associated baghouse, the permittee shall determine compliance through maintenance of the records required by paragraph **5.d.** below.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

b. See **Section G – General Provisions**, paragraph **(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements**.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the total weight of carbon fines processed at the D & E Pneumatic Fines Conveyor System each month. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the total hours of carbon fines processing during the month. [401 KAR 52:020, Section 10]

c. The permittee shall visually inspect the D & E Pneumatic Fines Conveyor System baghouse once per week during D & E Pneumatic Fines Conveyor System operations. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined in paragraph **5.d.(1)-(4)**, below. [401 KAR 52:020, Section 10]

d. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specification a monitoring device for the continuous measurement of the pressure loss of the gas stream through the D & E Pneumatic Fines Conveyor System baghouse. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

a. The permittee shall record the total weight of carbon fines processed at the D & E Pneumatic Fines Conveyor System each month.

b. The permittee shall record the total hours of D & E Pneumatic Fines Conveyor System operations during the month.

c. The permittee shall record the findings of the weekly visual inspection and any corrective actions taken as a result.

d. During all periods of malfunction of the baghouse, if the D & E Pneumatic Fines Conveyor System is in operation, a daily (calendar day) log of the following information shall be kept:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

72 (--) D & E Pneumatic Fines Conveyor System (Continued)

(1) Whether any air emissions were visible from the baghouse stack;
(2) Whether the visible emissions were normal for the baghouse.
(3) The cause of any abnormal emissions and any corrective action taken.
(4) If visible emissions are observed, the permittee shall perform a Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the D & E Pneumatic Fines Conveyor System stack. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

e. The permittee shall record a daily reading of the pressure loss of the gas stream through the baghouse as indicated by the continuous monitor.
f. The permittee shall record all maintenance activities performed at the baghouse.

6. Specific Reporting Requirements:

The permittee shall submit a report of the following information to the Division for Air Quality's Ashland office in accordance with section **F.7.** and **F.8.** of this permit:

a. Any exceedance of the particulate matter and opacity emission limitations within thirty days of when the exceedance is determined.
b. The occurrence, duration, cause, and any corrective action taken for each incident when the D & E Pneumatic Fines Conveyor System is in operation but the baghouse is not in operation.

7. Specific Control Equipment Operating Conditions:

See the **Specific Monitoring**, **Recordkeeping**, and **Reporting Requirements**, above.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

Description	Generally Applicable Regulation
EP 46, (CAS-02) Furnace Feedtank and Dewatering Screw	None.
EP 47, (CAS-03) Wastewater Storage Tank	None.
EP 54, Four (4) #2 Fuel Oil Tanks	None.
EP 58, Six (6) Soda Ash Slurry Mix Tanks	None.
EP 63, Two (2) Hydrochloric Acid Storage Tanks	None.
EP 64, Three (3) 2000-ton Coal Storage Silos	None.
EP 65, 250 ton Pitch Storage Bin	401 KAR 59:010
EP 66, Two (2) 15-ton Reclaim Hoppers	401 KAR 59:010
EP 67, B-Line 50-ton Mill Feed Bin	401 KAR 59:010
EP 68, C-Line 50-ton Mill Feed Bin	401 KAR 59:010
EP 69, D-Line 50-ton Mill Feed Bin	401 KAR 59:010
EP 70, E-Line 50-ton Mill Feed Bin	401 KAR 59:010
EP 71, Rail Car/Truck Unloading Hopper	401 KAR 59:010
EP --, Haul Road, 0.4 mile, paved	401 KAR 63:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. Hydrofluoric Acid, Lead, Nitrogen Oxide, Particulate Matter, Sulfur Dioxide, and Volatile Organic Compound (VOC) emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

1. Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

2. Other obligations required by CAM for EP 08, 09, 11, 14, 15, 21, 22, 25, 26, 29, 31, 34, 35, 37, 39, 42, 43, 44, 45, 48, 49, 50, 51, 52, and 53:
   a. The permittee shall maintain the respective monitoring device(s) in accordance with manufacturer's specifications. [40 CFR 64.6(c)(3), and 40 CFR 64.7(b)]
   b. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. [40 CFR 64.6(c)(3), and 40 CFR 64.7(c)]
   c. Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. [40 CFR 64.6(c)(3), and 40 CFR 64.7(d)(1)]
   d. Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process. [40 CFR 64.6(c)(3), and 40 CFR 64.7(d)(2)]

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

e. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Division and, if necessary, submit a proposed modification to the permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. [40 CFR 64.6(c)(3), and 40 CFR 64.7(e)]

f. Based on the results of a determination made under **Section E - Source Control Equipment Requirement 2.d.**, the Division may require the permittee to develop and implement a Quality improvement plan (QIP). [40 CFR 64.6(c)(3), and 40 CFR 64.8(a)]

g. If required, the QIP shall include the elements contained in 40 CFR 64.8(b), and the permittee shall develop and implement the QIP as expeditiously as practicable and shall notify the Division if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined. [40 CFR 64.6(c)(3), and 40 CFR 64.8(b) and (c)]

h. Following implementation of a QIP, upon any subsequent determination pursuant to **Section E - Source Control Equipment Requirement 2.d.**, the Division may require that the permittee make reasonable changes to the QIP if the QIP is found to have failed to address the cause of the control device performance problems, or failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. [40 CFR 64.6(c)(3), and 40 CFR 64.8(d)]

i. Implementation of a QIP shall not excuse the permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement. [40 CFR 64.6(c)(3), and 40 CFR 64.8(e)]

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results;
   f. And Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by Section F.6 [Section 1b (V) 3, 4. of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Ashland Regional Office
1550 Wolohan Dr., Suite 1
Ashland, KY 41102-8942

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

11. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
   a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Environmental and Public Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

SECTION G - GENERAL PROVISIONS (CONTINUED)

16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
    a. Applicable requirements that are included and specifically identified in the permit and,
    b. Non-applicable requirements expressly identified in this permit.

17. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, in accordance with the terms and conditions of this permit.

EP 72 (--) D & E Pneumatic Fines Conveyor System

1. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

2. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   a. The date when construction commenced.
   b. The date of start-up of the affected facilities listed in this permit.
   c. The date when the maximum production rate specified in the permit application was achieved.

3. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

4. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration (test) on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.

SECTION G - GENERAL PROVISIONS (CONTINUED)

6. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

7. Pursuant to 401 KAR 50:045 Section 5 in order to demonstrate that a source is capable of complying with a standard at all times, a performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

(e) Acid Rain Program Requirements

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
   a. An emergency occurred and the permittee can identify the cause of the emergency;
   b. The permitted facility was at the time being properly operated;
   c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
   d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
   e. This requirement does not relieve the source of other local, state or federal notification requirements.

2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

   RMP Reporting Center
   P.O. Box 1515
   Lanham-Seabrook, MD 20703-1515.

2. If requested, submit additional relevant information to the Division or the U.S. EPA.

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
   e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H - ALTERNATE OPERATING SCENARIOS

Not Applicable.

SECTION I - COMPLIANCE SCHEDULE

This section contains compliance schedule requirements as specified by Section 1c of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26. Progress reports on this schedule must be submitted at least semiannually, or at more frequent intervals if required in the specific conditions outlined below. Reports shall include the following items: (a) Dates scheduled for achieving each milestone, and the actual date that compliance is achieved; and (b) An explanation of why dates in /the schedule of compliance were not or will not be met, and preventive or corrective measures adopted to ensure that compliance with future items will be brought back on schedule. Compliance certifications shall be mailed to the addresses listed in General Condition F.9

Within 30 days of issuance of the proposed permit, the permittee shall submit a compliance schedule for the implementation of any new monitoring, recordkeeping, and reporting requirements included herein as the result of CAM for emission points already in operation. The compliance schedule shall provide justification for the planned implementation of any requirements that will exceed 60 days.